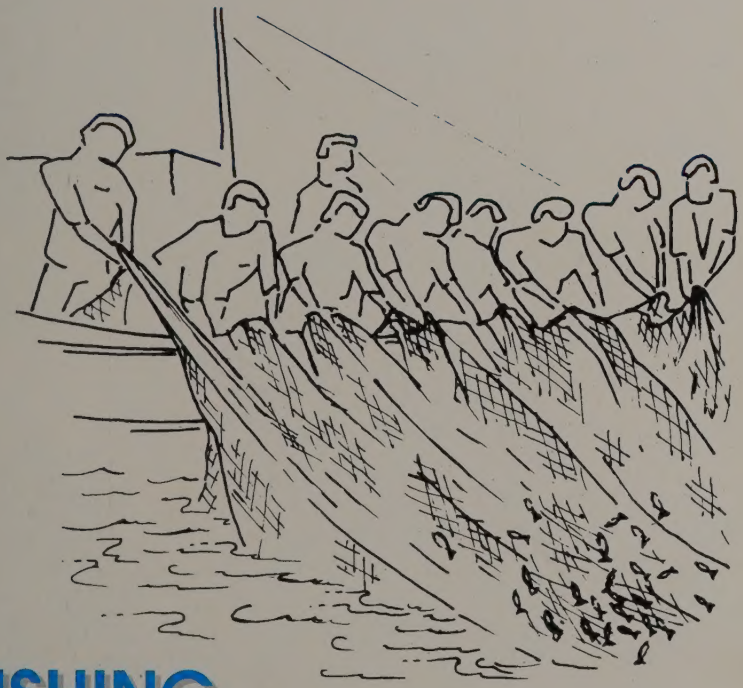
FAO
Tech.
Guid.
Resp.
Fish.
No.1

ISSN 1020-5292

FAO TECHNICAL GUIDELINES FOR RESPONSIBLE FISHERIES

1



FISHING OPERATIONS

NMFS Honolulu Library
00000000001796

FAO TECHNICAL GUIDELINES FOR RESPONSIBLE FISHERIES

1

LIBRARY
Pacific Islands Fisheries Science Center
2570 Dole St.
Honolulu, Hawaii 96822-2396

FISHING OPERATIONS

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 1996

Reprinted 1997, 1999

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

M-40
ISBN 92-5-103914-3

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior permission of the copyright owner. Applications for such permission, with a statement of the purpose and extent of the reproduction, should be addressed to the Director, Information Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, 00100 Rome, Italy.

© FAO 1996

PREPARATION OF THIS DOCUMENT

On the basis of an Expert Consultation on Responsible Fishing, Sidney, British Colombia, Canada, 6 to 11 June 1994, draft guidelines with respect to fishing operations were developed for FAO by staff members of the Fishing Technology Service (FIIT), led by John Fitzpatrick, Director a. i. Fishery Industries Division.

In line with the recommendations of the Committee on Fisheries (COFI), these draft guidelines were submitted to the Technical Consultation on the Code of Conduct for Responsible Fishing (the Code), Rome, 26 September to 5 October 1994 for information. The draft also contained a list of Annexes some of which were available, either in a complete form or at the advanced stage of drafting, whereas others had still to be elaborated.

In parallel with the development of the Code, the International Maritime Organization (IMO):

a) adopted the Torremolinos Protocol of 1993 relating to the Torremolinos International Convention on the Safety of Fishing Vessels, 1977;
b) amended the Convention on the Training and Certification of Watchkeepers;
c) developed a new Convention on the Training and Certification of Fishing Vessel Personnel; and
d) amended the International Regulations for the Prevention of Collisions at Sea (on the recommendation of FAO).

As an integral part of the Code, the FAO adopted the "Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas" (the Compliance Agreement) that includes, *inter-alia*, the concept of the *"authorization to fish"*. The inclusion of this concept in Article 8 of the Code, Fishing Operations greatly facilitated the revision of Annexes III and IV to these guidelines.

These guidelines have been prepared taking into account the:

a) report of the Expert Consultation on Responsible Fishing Operations, Sidney, British Colombia, Canada, 6-11 June 1994;
b) elaboration of the Compliance Agreement;
c) developments at the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks; and,
d) the elaboration of the Code of Conduct.

Further Annexes on specific technical subjects are in preparation and these will be released in the form of a "Supplement to the Technical Guidelines on Fishing Operations" as and when they are completed.

These Guidelines are preliminary and will be evaluated and revised as information accumulates through their implementation.

FAO Fishing Technology Service.
Fishing operations.
FAO Technical Guidelines for Responsible Fisheries. No. 1. Rome, FAO. 1996.
26p. 6 annexes.

ABSTRACT

In accordance with the recommendations of the Committee on Fisheries (COFI), FAO prepared the first draft of the technical guidelines in relation to Fishing Operations, which were submitted to the Technical Consultation on the Code of Conduct for Responsible Fishing, Rome, 26 September to 5 October 1994. The draft was prepared taking into account the Declaration of Cancún, Agenda 21 of United Nations Conference on Environment and Development (UNCED) and the Report of the Expert Consultation on Responsible Fishing Operations, Sidney, British Colombia, Canada, 6 -11 June 1994.

Thereafter, the draft was revised taking into account, the negotiations at the UN Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, the elaboration of the Code as well as developments at the International Maritime Organization (IMO) with regard to the Protocol to the Torremolinos International Convention on Fishing Vessel Safety and the new International Convention on Training, Certification and Watchkeeping for Fishing Vessel Personnel, 1995.

Technical Guidelines are given in support of the implementation of the Code in relation to fishing operations. These are addressed to States, international organizations, fisheries management bodies, owners, managers and charterers of fishing vessels as well as fishers and their organizations. Guidance is also given with respect to the general public.

Distribution:

All FAO Members and Associate Members
Interested Nations and International Organizations
FAO Fisheries Department
FAO Fisheries Officers in FAO Regional Offices
Interested Non-Governmental Organizations

CONTENTS

Background 1

Introduction 3

1. Objectives, Definitions and Application 3

2. Guidelines for all States 4

3. Guidelines for Flag States 7

4. Guidelines for Port States 12

5. Guidelines for Fisheries Protection 14

6. Guidelines for Fishing Activities 17

7. Guidelines for Energy Optimization and Protection of the Ozone Layer 22

8. Guidelines for the Design, Construction and Modification of Harbours and Landing Places for Fishing Vessels 23

9. Guidelines for the Removal of Redundant Offshore Structures, the Creation of Artificial Reefs and the Deployment of Fish Aggregating Devices 25

List of Annexes

I. Examples of International Conventions, Agreements and Arrangements Having a Bearing on Fishing Operations

II. The Standard Specifications for the Marking and Identification of Fishing Vessels

III. Proposed System for the Marking of Fishing Gear

IV. Proposals for the Application of a Standard System of Lights and Shapes for the Identification and Location of Fishing Gear

V. Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone

VI. Procedures for the Development and Management of Harbours and Landing Places for Fishing Vessels.

BACKGROUND

1. From ancient times, fishing has been a major source of food for humanity and a provider of employment and economic benefits to those engaged in this activity. However, with increased knowledge and the dynamic development of fisheries it was realised that aquatic resources, although renewable, are not infinite and need to be properly managed, if their contribution to the nutritional, economic and social well-being of the growing world's population was to be sustained.

2. The adoption in 1982 of the United Nations Convention on the Law of the Sea provided a new framework for the better management of marine resources. The new legal regime of the oceans gave coastal States rights and responsibilities for the management and use of fishery resources within their EEZs which embrace some 90 percent of the world's marine fisheries.

3. In recent years, world fisheries have become a dynamically developing sector of the food industry and coastal States have striven to take advantage of their new opportunities by investing in modern fishing fleets and processing factories in response to growing international demand for fish and fishery products. It became clear, however, that many fisheries resources could not sustain an often uncontrolled increase of exploitation.

4. Clear signs of over-exploitation of important fish stocks, modifications of ecosystems, significant economic losses, and international conflicts on management and fish trade threatened the long-term sustainability of fisheries and the contribution of fisheries to food supply. Therefore the Nineteenth Session of the FAO Committee on Fisheries (COFI), held in March 1991, recommended that new approaches to fisheries management embracing conservation and environmental, as well as social and economic, considerations were urgently needed. FAO was asked to develop the concept of responsible fisheries and elaborate a Code of Conduct to foster its application.

5. Subsequently, the Government of Mexico, in collaboration with FAO, organized an International Conference on Responsible Fishing in Cancún, in May 1992. The Declaration of Cancún endorsed at that Conference was brought to the attention of the UNCED Rio Summit in June 1992, which supported the preparation of a Code of Conduct for Responsible Fisheries. The FAO Technical Consultation on High Seas Fishing, held in September 1992, further recommended the elaboration of a Code to address the issues regarding high seas fisheries.

6. The One Hundred and Second Session of the FAO Council, held in November 1992, discussed the elaboration of the Code, recommending that priority be given to high seas issues and requested that proposals for the Code be presented to the 1993 session of the Committee on Fisheries.

7. The Twentieth Session of COFI, held in March 1993, examined in general the proposed framework and content for such a Code, including the elaboration of guidelines, and endorsed a timeframe for the further elaboration of the Code. It also requested FAO to prepare, on a "fast track" basis, as part of the Code, proposals to prevent reflagging of

fishing vessels which affect conservation and management measures on the high seas. This resulted in the FAO Conference, at its Twenty-seventh Session in November 1993, adopting the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, which according to FAO Conference resolution 15/93 forms an integral part of the Code.

8. The Code was formulated so as to be interpreted and applied in conformity with the relevant rules of international law, as reflected in the United Nations Convention on the Law of the Sea, 1982, as well as with the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995 (UN Agreement) and in the light of *inter alia* the 1992 Declaration of Cancún, the 1992 Rio Declaration on Environment and Development, in particular Chapter 17 of Agenda 21.

9. The development of the Code was carried out by FAO in consultation and collaboration with relevant United Nations Agencies and other international organizations including non-governmental organizations.

10. The Code of Conduct consists of five introductory articles: Nature and Scope; Objectives; Relationship with Other International Instruments; Implementation, Monitoring and Updating; and Special Requirements of Developing Countries. These introductory articles are followed by an article on General Principles which precedes the six thematic articles on: Fisheries Management, Fishing Operations, Aquaculture Development, Integration of Fisheries into Coastal Area Management, Post-Harvest Practices and Trade, and Fisheries Research. As already mentioned, the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas forms an integral part of the Code.

11. The Code is voluntary. However, certain parts of it are based on relevant rules of international law, as reflected in the United Nations Convention on the Law of the Sea of 10 December 1982. The Code also contains provisions that may be or have already been given binding effect by means of other obligatory legal instruments amongst the Parties, such as the Agreement to Promote Compliance with Conservation and Management Measures by Fishing Vessels on the High Seas, 1993.

12. The Twenty-eighth Session of the Conference in Resolution 4/95 adopted the Code of Conduct for Responsible Fisheries on 31 October 1995. The same Resolution requested FAO *inter alia* to elaborate as appropriate technical guidelines in support of the implementation of the Code in collaboration with members and interested relevant organizations.

INTRODUCTION

1. OBJECTIVES, DEFINITIONS AND APPLICATION

1.1 Objectives

1. To ensure the long term sustainability of living marine resources so that these can be harvested by generations to come thus making a substantial contribution to world food security and employment opportunities is one of the long term objective of the Code. Article 8 of the Code further develops the provisions regarding fishing operations.

2. The immediate objective of the Technical Guidelines is to provide practical advice to implement provisions of Article 8 to ensure all fishing operations are conducted responsibly.

1.2 Definitions

3. For the purpose of these Guidelines, unless expressed otherwise; the following definitions are used:

a) **"Fishing vessel"** means any vessel used or intended to be used for the commercial exploitation of living marine resources, including mother ships and any other vessel directly engaged in such fishing operations[1];

b) **"Fisher"** means an individual who takes part in fishing conducted from a fishing vessel, platform (whether fixed or floating) or from the shore;

c) **"Owner"** means an individual or entity holding shares in a fishing vessel or fishing licence;

d) **"Manager"** means an individual or entity acting on behalf of the owner for the operation of a fishing vessel or a fishing operation;

e) **"Charterer"** means any individual or entity that leases a vessel for a fixed period of time or for a voyage;

f) **"Fisheries Protection Vessel"** means a vessel not engaged in commercial activities, deployed by a State, for the purpose of monitoring, control, surveillance and law enforcement; and is clearly indentifiable being a government service;

g) **"Transshipment"** means that act of transferring the catch from one fishing vessel to either another fishing vessel or to a vessel used solely for the carriage of cargo.

---

[1] *Taken from the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (approved by the Conference of FAO, November 1993). It should be noted, however, the definition of a fishing vessel may vary from one agreement to another, and in some instances it is not defined as it is likely to become a controversial issue. Neither the UN Convention on the Law of the Sea, 1982, nor the UN Agreement contain a definition of a fishing vessel. Further, it should be noted also that definitions of fishing vessels in national laws concerning fishing are likely to be very wide indeed, and cover more than the definition taken from the Compliance Agreement.*

1.3 Application

4. The Guidelines may be applied by States on a voluntary basis to:

a) to all fishing operations on all oceans, seas and inland waters;
b) fishers, owners, managers, masters of harbours for fishing vessels, and competent authorities for the purpose of fisheries management and maritime transport; and,
c) all fishing vessels and vessels engaged in the transshipment of fish. as defined in paragraph 3.

2. GUIDELINES FOR ALL STATES (Ref. Section 8.1 of the Code)

2.1 Those Engaged in Fishing

5. States should provide conditions for those engaged in fishing that encourage responsible fishing by ensuring that:

a) the interests of those engaged in fishing are recognized and sufficiently secure to provide for their long term contribution to the health of fisheries resources and inter-generational equity;
b) incomes are sufficient to allow conservation and management measures to be imposed without causing undue financial hardship on fishers and fishing vessel owners;
c) matters concerning the safety and health of those engaged in the fishing industry are given due consideration by taking into account the provisions of the relevant ILO conventions, as well as the recommendations of its Committee on Conditions of Work and Service in the Fishing Industry; and,
d) provisions are made for the views of those engaged in fishing to be taken into account when management policies are being elaborated [2].

2.2 Authorization to Fish

6. Within waters under their jurisdiction, States should ensure that only fishing operations allowed by them are conducted.

7. The authorization to fish should contain details of the fishing activity so authorized, as well as information regarding the names and addresses of those authorized and, where appropriate, technical information related to any fishing vessel involved. States should maintain a record, updated at regular intervals, of all authorizations to fish issued by them.

---

[2] *Partnerships between those involved in fishing and those responsible for fisheries management should be encouraged; further information is given in the guidelines on fisheries management.*

8. The authorization to fish should contain a condition that the recipient(s) will abide by the provisions of the Code where and as these relate to fishing operations.

9. The authorization to fish may also contain conditions concerning, *inter-alia:*

a) area to be fished, species to be fished and quota for the vessel or fisher;
b) type of fishing gear or fishing implements so authorized;
c) time/seasonal limitations; the need for certain classes of fishing vessels to be issued with a Certificate of Registry; and,
d) the limitation of navigational warranties.

10. States should establish systems for the monitoring, control and surveillance (MCS) and law enforcement of fishing activities and related operations that include, *inter-alia:*

a) the granting of powers to the officers appointed to carry out monitoring, control and surveillance activities[3];
b) legal provision for action to be taken that is of sufficient gravity so as to be effective in achieving compliance with conservation and management measures;
c) appropriate marking systems for the identification of vehicles, vessels and aircraft authorized for monitoring, control and surveillance activities; and,
d) a communications network that would ensure that all those engaged in fishing are aware of regulations in force and the penalties for misconduct.

2.3 Education, Training and Certification

11. States should adopt systems of education and training programmes that would ensure that all those engaged in fishing operations are able to carry out their duties competently. In this respect they should be made aware of the provisions of the Code as well as relevant international conventions, legal instruments and codes of practice. These systems of education and training programmes would have to take into account the level of general education and the fishing activities to be carried out. It would be unreasonable to expect artisanal fishers to understand the provisions of legal instruments; on the other hand, those who expect to be placed in charge of large fishing vessels must have a knowledge of such instruments. The system would have to be developed in such a way that the older existing participants would not be disadvantaged. They should have the opportunity to attend upgrading courses and obtain dispensations. Therefore, any new requirements for certificates should include a "grandfather" clause.

12. States should also maintain records of certificates issued and that these records should be stored in a readily retrievable format. The entry in the record should give, *inter-alia*, the following information:

---

[3] *Some countries find it appropriate to enter into a commercial form of contract for MCS purposes.*

a) details of the issuing authority;
b) a description of the discipline covered by the certificate;
c) its validity and conditions attached with regard to its scope;
d) name, date of birth and nationality of the holder; and,
e) title, signature of the issuing officer and date of signature.

13. In this respect, it should be noted that the word "Certificate" is defined in the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (1995) as meaning ,"a valid document, by whatever name it may be known, issued or recognized in accordance with the provisions of the Convention, authorizing the holder to serve as stated in this document or as authorized by national regulations."

14. States should ensure that measures applicable in respect of a person or persons charged with an offence relating to a fishing operation, should include provisions which may permit, *inter alia*, refusal, withdrawal or suspension of authorization:

a) to fish; and,
b) to serve as masters or officers of a vessel.

15. With regard to masters or other officers of a fishing vessel, the measures taken should be entered in the record (mentioned in paragraph 12 above) of the offender and, as appropriate, in the record of service and/or on the certificate of competency held by the offender. The measures should be sufficiently transparent to ensure that a flag State (other than the State that issued the certificate) would also be fully aware of the action taken in this respect.

16. At the request of a flag State intending to employ foreign nationals, other States concerned should cooperate by providing information concerning the competence of their nationals.

2.4 Safety

17. States should ensure that all fishing operations are carried out in safety.

18. States should make arrangements together and with the appropriate international organization for the integration of fishing vessel operations into search and rescue (SAR) systems. For such purposes, and taking into account the size and types of fishing vessels in a fleet, as well as the likely disposition of individual vessels, States should give due consideration to the adoption of integrated safety systems, such as:

a) the IMO Global Marine Distress and Safety System (GMDSS) the basic concept of which is that search and rescue authorities ashore, as well as shipping in the immediate vicinity of the ship in distress, will be rapidly alerted to a distress incident so that they can assist in a coordinated SAR;

b) operation with the minimum of delay; the system also provides for urgency and safety communications and the promulgation of maritime safety information, navigational and meteorological warnings and forecasts and other urgent safety information to ships;
c) the International Telecommunications Union (ITU) system of communications for maritime mobile and maritime mobile-satellite services; and,
d) vessel position reporting systems.

19. States should also make safety arrangements, either individually or together as may be appropriate, for inland water fisheries [4].

20. States should establish a system of forecasting and broadcasting through which fishers would be given information on weather and areas to be avoided.

3. GUIDELINES FOR FLAG STATES (Ref. Section 8.2 of the Code)

3.1 Flag Allocation, Authorization to Fish and Records

21. A flag State should establish a system to record details of vessels entitled to fly its flag whether through the process of the issue of a Certificate of Registry or other document in connection with the allocation of a flag or licence to fish. In addition, the system should allow ready comparison with the record of authorizations to fish (mentioned in paragraph 7) granted to fishing vessels. Since in many countries, the competent authority for the register of a fishing vessel is often different from the authority that would issue an authorization to fish there should be a link between both activities; this is particularly important in the case of vessels changing flags.

22. Further to the provisions of paragraph 7, the "authorization to fish" issued to a fishing vessel should contain conditions to be met by the owners, managers and/or charterers with regard to:

a) the allocation of a flag to a fishing vessel;
b) information on the vessel required for entry in the national record;
c) information on catch retained and on catch discarded; and,
vessel position reporting.

23. All fishing vessels operating or intending to operate in waters of States other than those of the flag State or on the high seas, should carry a document that attests to its nationality.

---

[4] *It should be noted that inland waters are generally excluded from the provisions of maritime safety programmes. Furthermore, small-scale fisheries, whether inland water or in the marine environment, would require special attention by States.*

24. Furthermore, flag States should ensure that their fisheries research vessels, which operate or intend to operate in waters of States other than those of the flag State or on the high seas, are also issued with a Certificate of Registry and that they carry authorization issued by the competent authority in connection with their activities. In this connection, such vessels should follow internationally agreed codes of practice[5].

25. In general, fishing vessels should be subject to a process of immatriculation and a public record should be kept for fishing vessels in which the following information, as appropriate, should be recorded:

a) name of vessel or number;
b) port of registry/home port;
c) ITU International Radio Call Sign [6];
d) length overall, as used to measure length for the purpose of the International Regulations for Preventing Collisions at Sea, 1972;
e) registered length, as defined in the Torremolinos International Convention for the Safety of Fishing Vessels, 1977, as modified by the Torremolinos Protocol of 1993 relating thereto;
f) gross registered tonnage as defined in the International Convention on Tonnage Measurement of Ships, 1969;
g) material of build;
h) vessel type/fishing method(s);
i) hold capacities in cubic meters; number of crew;
j) horse power of main engine(s) in kW;
k) date of build; Lloyd's Register number (where applicable);
l) INMARSAT number (where applicable);
m) name(s) and address of owner(s) and/or manager(s); and,
n) details of mortgages, maritime liens and other encumbrances.

26. The flag State should ensure that vessels to which it has allocated its flag carry on board the original of the Certificate of Registry or document in connection with the allocation of a flag. The vessels should also carry the authorization to fish issued by the competent authority.

27. A flag State may issue a document in which it calls on all other States to recognize that the vessel is sailing under its protection. This facility is often used when a vessel is being delivered to the flag State from the place where it had been built or in the case of a vessel that has had its registry closed by another State on the sale of the vessel to an entity in a new flag State. On arrival in the new flag State, a regular Certificate of Register (or Provisional Certificate) would normally be issued.

---

[5] *Standards for the conduct of fisheries research vessels operating within waters under the jurisdiction of a State other than that of the flag State will be produced as a supplement.*

[6] *Details of the International Telecommunications Union system of call signs assigned by the Union and States are given in the Standard Specifications for the Marking of Fishing Vessels. Annex II refers.*

28. An application for closure of the register or entry in a national record of fishing vessels should be accompanied by supporting information as to:

a) the reason for the application (decommissioning/scrapping/sale); and,
b) if applicable the name(s) and nationality or nationalities of the new owners.

29. The flag State should provide details of the closure and, where known, the name of the new flag State to the appropriate international organization and to States Parties to any international agreement for the conservation and management of living marine resources, to which the flag State is a party.

30. A flag State should not delete from its registry, a fishing vessel that is the subject of a joint venture agreement and should remain responsible for the vessel at all times. In this respect, it would be important to note that there may be a case for exceptions to this rule with respect to a vessel under a demise charter (through which a vessel is leased bare of officers and crew for a fixed period of time) since some States allow for the primary register to be suspended or cancelled.

3.2 Fishing Vessel Maintenance and Mandatory Survey

31. A flag State should ensure that fishing vessels entitled to fly its flag are maintained in accordance with its national rules as well as the provisions of relevant international conventions to which it is a party and that vessel's documents are in order at all times.

32. The competent authority should maintain, as appropriate, a vessel survey service. This may be supported through arrangements with other States or the major classification societies particularly where a vessel rarely calls at a port in its flag State.

33. A flag State should ensure, through regular inspection of vessels entitled to fly its flag that they do not use anti-fouling paints containing compounds that endanger the aquatic environment.

3.3 Position Reporting of a Fishing Vessel

34. All fishing vessels should keep appropriate fishing and navigational logs and regularly report the position of the vessel to the competent authority. The position of the vessel may be reported in a number of ways and the requirement would differ with regard to the size of the vessel, its area of operation, the type of safety network in force and weather patterns. The authorization to fish could include a requirement for the carriage of equipment for the transmission of the position of a vessel over a local radio network or satellite communications system.

3.4 Marking of Fishing Vessels and Fishing Gear

35. A flag State should also ensure that vessels entitled to fly its flag are marked in accordance with the Standard Specification and Guidelines approved by the FAO Committee on Fisheries (COFI) at its 18th Session, Rome, 10-14 April 1989, for adoption on a voluntary basis. Annex II refers.

36. National legislation should also contain a requirement for the marking of fishing gear and fishing implements in order to identify the owner of the gear. Such requirements should take into account uniform and internationally recognizable gear marking systems. Nets, lines and other gear anchored in the sea as well as fish aggregating devices and nets, lines or fish aggregating devices which drift in the sea should also carry marks to indicate their position and the extent of the gear. Further details are given in:

a) Annex III "Standard Specifications for the Marking of Fishing Gear"; and,
b) Annex IV "Guidelines for the Application of a Standard System of Lights and shapes for the identification and Location of Fishing Gear".

3.5 Safety of Fishing Vessels

37. States should adopt standards of safety for all types and sizes of fishing vessels.

38. In setting standards of safety for fishing vessels, States should take into account :

a) the Torremolinos International Convention for the Safety of Fishing Vessels, 1977 and its Protocol of 1993 (not in force);
b) FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels; and,
c) FAO/ILO/IMO Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels.

3.6 Training and Certification

39. Further to the guidance given in paragraphs 11 to 16, flag States should ensure that only trained, experienced and, where appropriate, certificated persons are placed in charge of fishing vessels entitled to fly their flags. In this respect, they should take into account the provisions of the ILO/FAO/IMO Document for Guidance on Fishermen's Training and Certification as, or as may be amended. Since it is common practice for the training of officers and crews for fishing vessels to be conducted by a different authority to the one responsible for the examination of candidates for Certificates of Competency, States should ensure that the Code is brought to the notice of the authorities. Trainees should be well versed in the provisions of the Code in preparation for an examination for a Certificate of Competency.

40. A flag State should assure itself that:

a) foreign nationals under consideration for service as masters or other officers on board fishing vessels entitled to fly its flag, have been adequately trained; and,
b) where, applicable, their Certificates of Competency meet the requirements of the flag State for its own nationals.

41. States, whose nationals are under consideration for employment on foreign flag vessels, should cooperate by providing details of such nationals on request from the flag State.

42. Owners, managers and charterers must ensure that a vessel's documents are in order for the intended voyage. In particular, they should ensure that a Certificate of Registry is valid since a lapsed certificate could render a vessel Stateless and such an omission could have serious consequences for a vessel operating in the waters of another State or on the high seas.

3.7 Access to Insurance

43. Flag States should facilitate access to insurance markets by owners, managers and/or charterers in order to procure coverage for vessels, crew members and liability towards third parties; actual requirements, which would vary from place to place, may include, *inter alia:*

a) access to foreign exchange;
b) facilitation of marine mutual organizations;
c) other legal provisions (e.g. limitation of legal liability).

44. There should be a requirement for owners, managers and/or charterers of a fishing vessel to carry insurance coverage for the crew and risks to third parties as well as pollution of the aquatic environment from the operation of the vessel. If a vessel is the subject of a grant or loan application, there should also be a requirement to take insurance coverage against loss or damage to the vessel.

3.8 Repatriation of Crew

45. Flag States should ensure that crew members are entitled to repatriation in accordance with the principles laid down in the "Repatriation of Seafarers Convention (Revised), 1987, (No. 166). The Convention expressly provides, in Article 1 (2), for the application of its contents to fishing vessels following consultations between the competent authority and the social partners.

4. GUIDELINES FOR PORT STATES (Ref. Section 8.3 of the Code)

4.1 Assistance to a Foreign Flag State

46. Port States should establish procedures in their national legislation, in accordance with international law, including applicable international agreements or arrangements, for it to achieve and to assist other States in achieving the objectives of the Code. Details of these procedures and measures to be taken to enforce them, should be made available by the port State to all other States.

47. A port State should not discriminate in form or in fact against vessels of any other State.

4.2 Inspection by a Port State

48. A port State should inspect such documentation required to be presented to the competent authority on entering a port with regard to the fishing vessel[7], its crew and its cargo. The examination of the fishing vessel and its documents should include, *inter alia*:

a) a certificate in connection with the registry of the vessel or other document associated with the allocation of the flag it wears;
b) the safety certificate of the vessel;
c) the authorization to fish;
d) where applicable, its authorization to fish on the high seas;
e) the examination of the fishing gear and catch to determine whether or not these comply with:
   i) national regulations for vessels operating within the EEZ of the port State;
   ii) international agreements for the conservation and management of living marine resources and protection of the environment.

4.3 Detention

49. A port State may detain a fishing vessel if it has sufficient reason to believe that the vessel does not comply with the above requirements, unless, in the case of sub-paragraph 47 b), that:

a) the deficiencies cannot be rectified in the port;
b) in the case of navigation equipment and the vessel's propulsion machinery, the emergency or stand-by equipment has been adequately demonstrated;

---

[7] *Further guidance is set out in IMO Conventions:*
- *Convention on Facilitation of International Marine Traffic (FAL);*
- *Convention on the Safety of Life at Sea (SOLAS);*
- *Torremolinos International Convention for the Safety of Fishing Vessels, 1977, as modified by the Torremolinos Protocol of 1993 relating thereto.*

c) in the case of vessels in class, the classification society surveyor concerned is in agreement.

50. The port State should immediately inform the flag State of any deficiencies found and of any action taken. The port State should also be prepared to take any, or further action as the case may be, at the request of the flag State.

51. A fishing vessel may not be unreasonably detained[8]. If, in the opinion of the owner, a vessel is unreasonably detained, compensation may be claimed from the port State. However, the owner of a fishing vessel should not have the right to claim for lost fishing time or for alleged loss of income with respect to sale of the catch.. For this purpose, the Master of a fishing vessel is considered to be an agent of the owner.

52. Pursuant to paragraph 49 above, the port State should also inform the relevant international organization as may be required under any international convention, legal instrument or regional arrangement to which the port State is a Party.

4.4 Validity of Certificates and Authorization to Fish

53. In the event that a certificate or document evidencing the allocation of a flag or authorization to fish may expire after the vessel leaves port and while the fishing vessel is at sea, the flag State should be immediately informed. This information should also be made available to the competent fisheries management organization for the area in which the vessel may operate with respect to the "Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas".

4.5 Stateless Fishing Vessel

54. If a port State has reasonable cause to believe that a vessel is under the flag of two States and using them according to convenience, that vessel may be treated as if were to a vessel without nationality and detained. The vessel may be disposed of if so required to offset the costs incurred by the port State.

4.6 Training

55. States should cooperate with each other to adopt the common standards of training for port State inspectors and surveyors[9].

---

[8] *Provisions are made for detention under international convention; see also the Protocol to Torremolinos.*

[9] *For large cargo ships, a number of regional memoranda of understanding have been developed; these exclude fishing vessels, but not other vessels covered by the Code. Complaints of discrimination by port State surveyors has led IMO to elaborate common standards of behaviour.*

5. GUIDELINES FOR FISHERIES PROTECTION

5.1 Fisheries Protection Vessels

56. As set out in paragraph 10, States should establish a system of monitoring, control, surveillance and law enforcement which may include the use of vehicles, vessels, aircraft and other means.

57. Vessels assigned by States for the purpose of paragraph 55 should have the right to stop and board any vessel suspected of fishing illegally or for the purpose of determining the right of the vessel to the flag it displays or if not clearly marked, to determine its name, port of registry and nationality. Such interventions should also be valid for vessels flying the flag of a State other than that of the fishery protection vessel.

58. A fishery protection vessel should be clearly marked and identifiable as being on government service to avoid uncertainty on behalf of the crew of a fishing vessel as to its purpose. In particular it should:

a) be marked in accordance with the Standard Specifications for the Marking and Identification of Fishing Vessels;
b) be painted with the words "Fisheries Protection Vessel" on both sides above the water line; the style and size of the letters to follow the Standard Specifications for the Marking of Fishing Vessels; and,
c) two bands of paint against a contrasting background each band 0.8 m wide and 0.8 m apart sloping forward at 60 degrees to the base line of the vessel should be applied forward of amidships from the water line to the line of the deck or gunwale as the case may be and in a manner so as not to obliterate the name of the vessel or the marks to be displayed under a) and b) above.

59. The fisheries protection vessel should carry documentation giving proof of the authority vested in its Master and the "authorized officer" for the purpose of fisheries protection in an EEZ or in areas of the high seas covered by relevant international convention or agreement to which the flag State is a party.

5.2 Fisheries Protection Officers

60. Fishers should be made fully aware of the authority vested in fisheries protection officers through programmes for their certification and training as well as public awareness programmes.

61. The general powers of authorized officers for the purpose of fisheries protection with respect to any fishing vessel of the enacting State or as provided for under any international agreement for conservation and management measures regulating high seas fishing to which the enacting State is a party, should include, *inter alia*, the power to:

a) cause the master (of a fishing vessel) to stop the vessel;

b) require the master to stop fishing and take the fishing gear of the vessel back on board;

c) require the master to facilitate the boarding of the fishing vessel by all appropriate means;

d) go on board the fishing vessel together with such other persons as may be required to assist in exercising the powers of the authorized officer;

e) require the master, the crew or any of them to produce any certificate of registry, record of fish caught and any other document relating to the fishing vessel and to the crew or any member thereof or to any person on board the fishing vessel;

f) examine and take copies of any document mentioned above; muster the crew;

g) require the master to appear and give any explanation concerning the vessel and the crew or any person on board the fishing vessel and any document mentioned in paragraph e) above;

h) make any search, examination or enquiry which may be considered necessary to find out whether any provisions of national legislation has been contravened or, as the case may be, of any provision of an international agreement for a high seas area;

i) require the master to take the fishing vessel to a port or harbour in the flag State of the protection vessel for the purpose of carrying out of any search, examination or enquiry or, to a port or harbour as provided for under any international agreement for a high seas area as the case may be;

j) in the case of any person believed to have committed an offence against national regulations or regulations under an international agreement to which the enacting State is a party, the authorized officer may without summons, warrant or other process, take the suspected offender and take or require the master to take the vessel in respect of which it appeared that there had been an offence together with the crew thereof to a port or harbour the enacting State and bring them before a competent court and detain the master and crew and the vessel until the alleged offence has been adjudicated upon;

k) take, having regard for the safety of the fishing vessel, steps to immobilize any fishing vessel seized, taken or detained for the purpose of preventing the vessel being taken by any person prior to the release of the fishing vessel;

l) seize any fishing gear, instruments or appliances believed to have been used in the commission of such offence;

m) seize any fish believed to have been taken or fish products produced in the commission of such offence; and,

n) seize or take copies of any documents believed to be relevant to such offence.

62. In exercising the powers referred to in paragraph 60 above, the authorized officer may use such force as may be reasonably necessary.

63. In the event of resistance by the fishing vessel to comply with a request to be escorted to the nearest port, the position of the vessel should be monitored and reported by the fishery protection vessel. On arrival of the fishing vessel at a port, the Master of the fishery protection vessel, with the support of the authorized officer on board, should lodge a "sea protest" with the competent authority. Should the fishing vessel continue to fish, the fishery protection vessel may take appropriate

action to sever the fishing gear and report the action taken to the competent authority.

5.3 Stateless Fishing Vessel

64. A fishing vessel which is Stateless by virtue of Article 92, paragraph 2 of the United Nations Convention on the Law of the Sea, may be escorted to the nearest port. Such action should not be deemed to call into question the nationality of the crew or declare any member of the crew Stateless. The embassy/consulate of each crew member and the relevant international organization should be duly informed by the port State.

65. A fishing vessel should not be considered to be Stateless if the Certificate of Registry or documentation concerning the allocation of flag expired while the vessel is at sea, provided that the intention of the flag State, to revalidate the said certificate or document is obtained by the protection vessel by facsimile. Voice communication by radio or telephone link should not be acceptable for this purpose.

5.4 No Force Strategies

66. States should also employ "no force" strategies and these may include, *inter-alia:*

a) the use of observers (without enforcement powers) on board vessels for the purpose of collecting data and reporting on the conduct of the Master and the crew;
b) the establishment of sub-regional and regional records of fishing vessels and authorizations to fish;
c) remote sensing and communication techniques [10];
d) catch and gear monitoring at the dockside as well as catch processing plant inspections; and,
e) inspection and reporting by Port States.

67. Vessels and aircraft used for the purposes of monitoring, control, surveillance and law enforcement, should be equipped with appropriate communication systems and means for the identification of fishing vessels and the verification of their authorizations to fish without the need for boarding.

68. States should also ensure that fisheries protection vessels and aircraft form an integral part of Search and Rescue (SAR) networks. A protection vessel, in addition to its traditional role as a "shepherd" to the fishing fleet, may also be used, in the

---

[10] *With regard to remote sensing and satellite communication systems, States should agree on technical specifications and minimum performance standards that would provide the basis for agreement on the admission in court of evidence so generated at the time of the alleged contravention, for example:*

- *identification of the vessel;*
- *position of a vessel and date and time;*
- *operational mode.*

course of its normal duties or on special assignment, to collect and relay information related to weather.

6. GUIDELINES FOR FISHING ACTIVITIES

(Ref. Sections 8.4 and 8.5 of the Code)

6.1 Fishing Gear

69. The competent authority should adopt appropriate management policies with regard to allowable fishing gear, fishing practices and operations [11].

70. Those engaged in fishing activities should respect regulations with regard to fishing gear and fishing methods and should not use gear or methods nor should they fish in areas or times of the year that would jeopardize a fishery or endanger fish stocks or the environment.

71. No new fishing practices or fishing methods should be introduced unless prior assessment has demonstrated that it would not result in significant waste of target or non-target species. In like manner, no new fishing practices or fishing gear should be introduced by the industry on a commercial basis unless prior assessment has shown that it would not be to the detriment of artisanal or small scale fisherfolk and their communities.

72. In general, the competent authority should allocate fishing rights to artisanal and small scale fishers. Control should also be exercised to reduce conflict between passive and active gears and between the small scale fisheries sector and those engaged in industrial fisheries.

73. The competent authority should also give due consideration to the degree of selectivity of fishing practices and fishing gear with respect to target and non-target species when elaborating regulations. In this respect, the competent authority should consult those engaged in fishing in order that due account can be taken of the range of selective fishing tactics and gear commonly used by the industry.

74. Competent authorities, research institutions and the fishing industry should collaborate in the development of more selective fishing gears.

75. There should also be close collaboration between States to develop standard methodologies into fishing gear selectivity as well as selective fishing methods and tactics. States and the research institutions involved should ensure wide dissemination of the information generated in the process.

---

[11] *Management practices and operational guidance for those engaged in fisheries with regard to "Harvesting Practices" will be produced as a supplement to these guidelines.*

6.2 Conduct of Fishing Vessels

76. No fishing vessel should anchor or remain on a fishing ground where fishing is in progress if it would interfere with such fishing unless required for the purpose of its own fishing operations or as a consequence of an accident or other circumstances beyond its control.

77. Subject to compliance with the International Regulations for the Prevention of Collision at Sea all vessels should conduct their operations so as not to interfere with the operations of fishing vessels, or fishing gear already set.

78. Except in cases of force majeure, no fishing vessel should dump in the sea or inland waters, any substance which may interfere with fishing or obstruct or cause damage to fish, fishing gear, other fishing vessels or the aquatic environment.

79. When a fishing vessel fouls or otherwise interferes with gear not belonging to it, it should take all necessary measures to reduce to a minimum the damage which may result to such gear. The fishing vessel to which the gear belongs should, at the same time, avoid taking any action which may tend to aggravate the damage.

80. Those in charge of a fishing vessel or any other fishing activity, should endeavour to retrieve lost fishing gear. In the event of unsuccessful attempts to retrieve the gear, the extent, type, position and gear mark should be reported to the competent authority. Any other lost gear encountered, should, to the extent possible, be recovered and taken to port or if not recovered, details of the gear and its position should be reported to the competent authority.

81. Fishers should be made aware of and respect the regulations governing "ship traffic separation schemes", ships routeing and regulations for the avoidance of sensitive areas.

82. In addition to complying with the rules relating to lights and shapes as prescribed in the International Regulations for Preventing Collisions at Sea, fishing gear should be marked with respect to its position in the sea[12].

6.3 Records of Fishing Vessel Activities

83. Fishing vessel owners, managers and fishers should ensure that the regulations set by the competent authority with respect to fishing gear, fishing methods and reporting on catch taken are followed. Records required by the competent authority should be maintained by those in charge of a fishing vessel in the form of log books and should include, as appropriate:

---

[12] *IMO reviewed the report of the Expert Consultation on the Marking of Fishing Gear, Victoria, British Colombia, Canada, 14-19 July 1991 and accepted proposals made by FAO regarding changes to the Collision Regulations; IMO did not consider it necessary to include the proposals for the marking of fishing gear in the Regulations. Annex IV refers.*

Deck Log

a) date, time and port of departure;
b) officer of the watch;
c) noon position by long/lat or Decca/Loran readings;
d) weather and sea state;
e) auto-pilot on/off time and date;
f) time and date of changing from steaming to fishing mode and vice versa;
g) time, date and position of transshipment;
h) date, time and port of arrival; and.
i) interventions by authorized persons, at sea or in port to be recorded in the remarks column;

Fishing Log

a) time, date and position of setting fishing gear;
b) type and amount of fishing gear deployed;
c) when and where (time, date and position) gear retrieved;
d) composition and weight of catch taken;
e) catch processed on board and storage details;
f) catch landed by species and weight; and,
g) observers remarks.

Machinery Log

a) date, time and port of departure;
b) fuel on sailing;
c) weather and sea state;
d) officer of the watch;
e) noon readings;
f) hours run or total revolutions per watch/day by main engine(s);
g) hours run by auxiliary engines per watch/day;
h) hours run by refrigeration machinery per watch/day;
i) fish room temperatures;
j) time oily-water separator in use;
k) average main engine exhaust and water temperatures;
l) engine RPM in free running and fishing mode;
m) times and dates deck machinery in use; and,
n) details of ballasting and deballasting.

84. To enable those on board to comply with regulations concerning the maintenance of log books, owners should ensure that fishing vessels are equipped with appropriate navigation equipment and instrumentation.

85. In addition to log books kept in a hand written format, fishing vessels should be fitted with electronic data storage devices and to the extent possible, remote sensing devices that would record the position and performance of the fishing vessel for the purpose of fisheries management and safety at sea. To the extent practical, such

systems should be fully automatic and only require that the catch data be manually entered. The technology exists for such applications and the requirements for data to be transmitted could include, but need not be limited to:

a) main engine performance ;
b) temperature sensors (tunnel freezers, fishrooms, etc.);
c) vessel position and course;
d) echo sounder/sonar data; and,
e) catch data.

6.4 Care of the Catch

86. The officers and crew of a fishing vessel should ensure that the catch is handled in such a manner that quality is maintained until the catch is discharged.

87. Owners and/or managers should ensure that the fishrooms on board fishing vessels are fitted out in the appropriate manner for the type of fishing activity anticipated. In particular, proper drainage should be achieved under all conditions. Where the washing down of the fishrooms is carried out using pumps (irrespective of the power source) the pump used for the hosing down of the fishroom shall not be the same as the pump for draining the bilge.

88. To the extent possible, owners and managers should ensure that the paint systems supplied for painting the fishroom or fixed fish containers are of a type that are antifungal and non-toxic.

89. Fishrooms should be ventilated periodically, especially when the vessel is used for the carriage of fish on ice.

6.5 Insurance Coverage

90. Owners and/or managers should carry sufficient insurance coverage to protect their interests in a fishing vessel, third party liabilities and for the protection of the crew. It should be noted, however, that there are no international requirements for a vessel to be insured. Furthermore, there are no mandatory levels of coverage since this is generally seen as a purely commercial risk and a matter for owners to determine in consultation with brokers or a marine mutual. Nevertheless, it is advisable that such policies should cover, *inter alia:*

a) hull and machinery;
b) protection and indemnity;
c) war and strikes; and,
d) pollution.

91. The Protection and Indemnity policies should give adequate coverage for the crew of a fishing vessel in the event of accident and/or death of a crew member.

92. Insurance coverage for fishing vessels under charter should include "loss of hire" in order to protect the crew for their wages.

93. Where appropriate, the competent authority should assist those engaged in fishing to form mutual insurance associations.

94. The competent authority should make it a legal requirement for owners or managers to cover risks to third parties and crew.

95. The actual vessel, the "Hull and Machinery" cover, being related to the value of the vessel and or replacement value, is usually the subject of negotiation for commercial reasons as stated above and may also be subject to survey on behalf of the underwriters prior to setting conditions.

96. There is also a case for the competent authority to require vessels on charter to provide cover in respect of crews' wages in cases of loss of hire or commercial set backs. This would be of particular relevance where nationals of a coastal State may be crew of a foreign flag vessel or in the case of a bare boat charter.

6.6 Transshipment

97. The transshipment of fish or fishing products at sea should be regulated to ensure compliance with all conservation and fisheries management measures.

98. With regard to the transshipment of catch between fishing vessels authorized to operate in an EEZ the transshipment should take place within the EEZ and:

a) the entry in the log books of each vessel should record the transfer giving date, time, position, quantity and type of fish; and,
b) the vessel receiving the transshipment should not proceed to a port outside the coastal State, for the purpose of discharging the catch, unless specifically authorized to do so by the coastal State.

99. The competent authority should set rules to cater for regular and authorized methods of fishing that necessitates the transfer of catch directly from a net deployed by a vessel fishing to other vessels and for vessels engaged in pair trawling and/or motherships.

100. The transfer of catch from a fishing vessel, a support vessel or reefer or other vessel engaged in the carriage of cargo, should also be recorded in the log books and a separate receipt or sales record should be furnished by the reefer or other vessel and should carry the seal of that vessel.

101. For all transshipment, whether made on the high seas, at sea within EEZ's or in a port, the bills of lading should show the name of the catching vessel and origin of the catch. In addition, the full documentation to be made available for scrutiny by a port State should give the:

a) name, port of registry, the nationality and international radio call sign of the vessel carrying the catch;
b) name, port of registry, the nationality and international radio call sign of the vessel that made the catch;
c) details of the authorization to fish;
d) amount of the catch by weight and by species; and,
e) fishing area(s) in which the catch and or part(s) of the catch was/were taken.

7. GUIDELINES FOR ENERGY OPTIMIZATION AND PROTECTION OF THE OZONE LAYER (Ref. Sections 8.6 and 8.7 of the Code)

7.1 Energy Optimization and Saving

102. States, in cooperation with relevant international organizations and the fishing industry should develop and adopt standards for the optimization of the use of energy in fisheries. Such standards and associated guidelines for their application, should cover both harvesting and post harvest sectors for full benefits to be derived by the sector as a whole.

103. Such standards and associated guidelines should take into account the provisions of the 1987 Montreal Protocol to the Vienna Convention on Substances that Deplete the Ozone Layer, since these have a direct influence on energy optimization programmes. Technical standards, specifications and recommendations will be prepared as a supplement to these guidelines.

104. Owners and/or managers should ensure that their vessels are designed or refitted with equipment to enhance energy optimization and reduce the emissions of dangerous substances to the atmosphere.

105. Owners, managers, charterers and officers of fishing vessels should adopt operational strategies that would contribute to energy saving. States could make a contribution to these strategies by improving Geographic Information Systems (GIS) and through the provision of fisheries-related information regarding stocks, their distribution, and migrations as well as sea bed characteristics. Electronic chart systems should also be upgraded to incorporate fisheries-related information. Furthermore, States, research institutions and commercial companies, should be encouraged to cooperate in the provision of satellite-generated information for use in real time as well as for forecasting fishing conditions.

106. Officers and crews of fishing vessels should be trained in energy optimization and energy saving-techniques. States and, where appropriate, non-governmental training institutions, should ensure that existing training courses are amended accordingly.

107. Officers and crews of fishing vessels should be conversant with the proper running and maintenance of marine machinery in order to ensure that harmful substances in exhaust gas emissions (NOx, SOx) do not exceed the levels set by the competent authority.

7.2 CFC and Halon

108. States should make provisions in national legislation for the phasing out of the use of Chlorofluorocarbon (CFC) in refrigeration systems as well as Halon in fire-extinguishing systems. They should ensure that the shipbuilding industry and those engaged in the fishing industry are so informed of the time frame.

109. States, owners, managers and those involved in the fishing industry should follow international guidelines for the safe disposal of CFC's.

8. GUIDELINES FOR THE DESIGN, CONSTRUCTION AND MODIFICATION OF HARBOURS AND LANDING PLACES FOR FISHING VESSELS (Ref. Section 8.9 of the Code)

110. States should establish an institutional framework for the selection or improvement of sites for harbours for fishing vessels and their operation which allows for consultation among the authorities responsible for coastal area management[13].

111. States should cooperate with each other where such coastal area management arrangements are of a regional or sub-regional nature.

112. Those responsible for fisheries development should ensure that such bodies provide for adequate research and monitoring of the environment. In particular, they should ensure that geographical information systems (GIS) include, inter alia:

a) hydrographic and weather data; charts of the sea bed (lake bottom) showing the geology, spawning beds, fishing areas/species distribution (fisheries atlas), oil/gas installations, pipelines and telephone lines as well as areas designated for sea bed mining[14];
b) position of land based facilities discharging waste products into the aquatic environment and the extent and type of discharge; and,
c) planned development projects and their implications.

113. States should require, as appropriate, an environmental audit in support of applications for new harbours or landing places or improvements to existing facilities.

---

[13] *The Integration of Fisheries into Coastal Area Management is the subject of Article 10 of the Code and is supported by separate guidelines.*

[14] *It would be normal to establish a distance from the coast or a depth contour as well as a grid size within which the charts should contain detailed information.*

114. In general, competent authorities should adopt acceptable standards[15] and follow guidelines for the design, construction, maintenance and management of harbours and landing places for fishing vessels, to ensure, inter alia:

a) safe havens for fishing vessels;
b) that fresh water supplies are available;
c) the provision of adequate sanitation arrangements;
d) that waste disposal systems, (including oil and oily water) are provided;
e) that there would be no pollution from external sources (non-fisheries activities);
f) that there would not be any pollution arising from fisheries activities;
g) the provision of adequate servicing facilities for vessels, vendors and buyers;
h) that maintenance programmes include the monitoring of the effects of operations conducted at the facility on the environment;
i) compliance with relevant conventions concerning pollution of the aquatic environment. In particular, Annex V of MARPOL 1972/8, Regulation No.3 (Regulations for the prevention of pollution by garbage);
j) integration with other users as in the case of a non-exclusive facility for the fishing industry; and,
k) that arrangements are made to combat the effects of erosion and siltation.

115. Users awareness programmes should be implemented to assist them to abide by the by-laws of the harbours and landing places. Furthermore. users should be encouraged to take an active part in the management structure established for ports, harbours and landing places.

---

[15] *Procedures for the development and management of harbours and landing places for fishing vessels, as well as the improvement of existing facilities, will be prepared as a supplement to these guidelines.*

9. GUIDELINES FOR THE REMOVAL OF REDUNDANT OFFSHORE STRUCTURES, THE CREATION OF ARTIFICIAL REEFS AND THE DEPLOYMENT OF FISH AGGREGATING DEVICES

(Ref. Sections 8.10 and 8.11 of the Code)

9.1 Policy

116. States should develop policies and management systems for increasing stock abundance and enhancing fishing opportunities through the use of artificial structures placed on the sea bed, in the water column or at the surface.

117. The competent authorities should be aware of the need, by international convention, for the removal of redundant offshore structures[16]. Furthermore, States should ensure that the competent authority for fisheries is consulted prior to decisions being made by those responsible for the total, or partial removal and disposal of such structures.

9.2 Artificial Reefs

118. The competent authorities should also take into consideration the provisions of relevant International Conventions concerning dumping, prevention of pollution (of the marine environment) and safety of navigation with regard to the creation of artificial reefs and the choice of materials for their construction.

119. Furthermore, the creation of artificial reefs should be seen within the context of the integration of fisheries into coastal area management in order to maximize benefits and reduce adverse interactions with other users of the zone.

120. The systems established for the management of artificial reef structures should include a requirement for the approval of construction and deployment of such reefs and structures and should take into account the interest of fishers, including artisanal and subsistence fishers.

121. The competent authority should also ensure that the authorities responsible for maintaining cartographic records and charts for the purpose of navigation, as well as relevant environmental authorities, are informed prior to the placement or removal of artificial reefs or fish aggregation devices.

---

[16] *On 19 October 1989, the IMO adopted Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone; these will be reproduced in the supplement series.*

9.3 Fish Aggregating Devices

122. Fish aggregating technology should be further developed to improve the performance of anchored and drifting devices.

123. The management systems concerning Fish Aggregating Devices (FADs) should set out the responsibility of the competent authority and the users for minimum design standards, operation and maintenance of FADs.

124. The competent authority should also establish a system of approval for the deployment of FADS and maintain a record of the owners. The record should contain, as a minimum requirement:

a) the mark assigned by the competent authority for the identification of ownership;
b) name and address of the owner(s);
c) type of FAD; and,
d) location of allocated geographical position.

125. The competent authority should ensure that the authorization to fish at FADs includes details of the fishing methods to be used as well as a requirement for reporting catches.

126. FADs whether drifting or anchored, should carry means to identify their position by day and by night.

127. The competent authority should also establish a system for the reporting of lost FADs and the retrieval of those considered to be a danger to navigation.

Annex I

Examples of International Conventions, Agreements and Arrangements Having a Bearing on Fishing Operations

Preparation of this Annex

This annex contains examples of international conventions, agreements and arrangements that have a bearing on fishing operations. These examples cover various aspects of fisheries management, prevention of pollution from the operation of ships, safety at sea and conditions of work and service in the fishing industry. It is recommended that the competent authority or authorities obtain further information on the status of these instruments and a list of addresses is supplied.

Background documents related to the preparation of this document include the instruments so listed and the Annual Reviews of the Division for Ocean Affairs and the Law of the Sea. The FAO data base on fishery agreements, "FARISIS" was also consulted.

CONTENTS

A. At the United Nations

B. At the International Maritime Organization

C. At the International Labour Organization

D. International Fisheries Agreements

A. AT THE UNITED NATIONS

1. **Convention on the Continental Shelf, 1958. In force.**
Purpose

To define and delimit the rights of States to explore and exploit the natural resources of the continental shelf.

2. **Convention on Fishing and Conservation of the Living Resources of the High Seas, 1958. In force.**
Purpose

Through international cooperation, to solve the problems involved in the conservation of the living resources of the high seas, considering that through the development of modern techniques some of these resources are in danger of being over-exploited.

3. **Convention on the High Seas, 1958. In force.**
Purpose

To codify the rules of international law relating to the high seas.

4. **United Nations Convention on Conditions for Registration of Ships, 1977. Not in force. (UNCTAD)**
Purpose

For the purpose of ensuring or, as the case may be, strengthening the genuine link between a State and ships flying its flag, and in order to exercise effectively its jurisdiction and control over such ships with regard to identification and accountability of shipowners and operators as well as with regard to administrative, technical, economic and social matters, a flag State shall apply the provisions contained in this convention.

5. **United Nations Convention of the Law of the Sea, 1982. In force.**
Purpose

To set up a comprehensive new legal regime for the sea and oceans and, as far as environmental provisions are concerned, to establish material rules concerning environmental standards as well as enforcement provisions dealing with pollution of the marine environment.

6. **Montreal Protocol on Substances that Deplete the Ozone Layer, 1987. In force. (UNEP)**
Purpose

To protect the ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it, with the ultimate objective of their elimination on the basis of developments in scientific knowledge, taking into account technical and economic considerations.

7. **International Convention on Maritime Liens and Mortgages, 1993. Not in force. (IMO/UNCTAD)**

Purpose

To improve conditions for the financing of ships and the development of national fleets.

B. AT THE INTERNATIONAL MARITIME ORGANIZATION

8. **Convention on Facilitation of International Marine Traffic (FAL), 1965. In force.**

Purpose

To facilitate maritime transport by simplifying and minimizing the formalities, documentary requirements and procedures associated with the arrival, stay and departure of ships engaged in international voyages.

9. **International Convention on Load Lines, 1966 and the Protocol of 1988. In force.**

Purpose

To establish uniform principles and rules with respect to the limits to which ships on international voyages may be loaded having regard to the need for safeguarding life and property at sea.

10. **International Convention on Tonnage Measurement of Ships, 1969. In force.**

Purpose

To establish uniform principles and rules with respect to the tonnage of ships engaged on international voyages.

11. **Convention on International Regulations for Preventing Collisions at Sea, 1972. In force.**[1]

Purpose

To establish principles and rules concerning lights and shapes to be displayed by ships.

12. **Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London Convention/LC- formerly "London Dumping Convention"/"LDC"), 1972. In force.**

Purpose

To control pollution of the sea by dumping, and to encourage regional agreements supplementary to the Convention.

13. **International Convention for the Prevention of Pollution from Ships 1973, as modified by its Protocol of 1978, MARPOL 73/78.**[2] **In force.**

Purpose

To preserve the marine environment by achieving the complete elimination of pollution by oil and other harmful substances and the minimization of accidental discharge of such substances.

---

1 *Supersedes COLREG 1960*

2 *Supersedes OILPOL 1954*

14. **Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil, 1973. In force.**

Purpose

To enable States to take action on the high seas in cases of maritime casualties resulting in grave and imminent danger of pollution to their coastline or related interests by substances other than oil.

15. **International Convention for the Safety of Life at Sea (SOLAS), 1974, its Amendments and Protocols.[3] In force.**

Purpose

To promote safety at sea by establishing a common agreement, uniform principles and rules. The first version was brought out in 1914 the second entered into force in 1933 and the third in 1952. The fourth version of SOLAS entered into force in 1965 and the current SOLAS was adopted in 1974.

16. **Convention on Limitation of Liability for Marine Claims, 1976. In force.**

Purpose

To establish uniform rules related to the limitation of liability for marine claims including claims subject to limitation and claims excepted from limitation.

17. **Torremolinos International Convention on the Safety of Fishing Vessels, 1977. and the Torremolinos Protocol of 1993 relating thereto. Not in force.**

Purpose

To provide uniform principles and rules concerning construction, equipment, stability, radiocommunications and other safety aspects of fishing vessels.

18. **International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 as amended in 1995. In force.**

Purpose

To promote safety of life and property at sea and the protection of the marine environment by establishing, in common agreement, international standards of training, certification and watchkeeping for seafarers.

19. **International Convention on Maritime Search and Rescue, 1979. In force.**

Purpose

To establish an international maritime search and rescue (SAR) plan covering the needs for ship reporting systems, SAR services and the rescue of persons in distress at sea.

20. **Convention on the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, 1988. In force.**

Purpose

To improve security and reduce the risk to passengers and crews on board ships.

---

[3] *Supersedes SOLAS 1960*

21. **International Convention on Salvage, 1989. Not in force.**
Purpose
To establish uniform rules regarding salvage operations.

22. **International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (1995). Not in Force.**
Purpose
To promote safety of life and property at sea and the protection of the marine environment by establishing in common agreement international standards of training, certification and watchkeeping for fishing vessel personnel.

C. AT THE INTERNATIONAL LABOUR ORGANIZATION

23. **Forced Labour Convention, 1930 (No.29).**
Purpose
To establish the principle that the use of forced or compulsory labour in all its forms should be brought to an end.

24. **Freedom of Association and Protection of the Right to Organize Convention, 1946 (No.87) and associated Conventions No.98 and No.135. In force.**
Purpose
To establish the principle of freedom of association for all workers and the right to organize and to promote voluntary collective bargaining between them.

25. **Abolition of Forced Labour Convention, 1957, (No.105)**
Purpose
To prohibit the use of any form of forced or compulsory labour in particular circumstances.

26. **Discrimination (Employment and Occupation) Convention, 1958, (No.111)**
Purpose
To establish the principle that there should be no discrimination in any employment or occupation on certain grounds.

27. **Medical Examination (Fishermen) Convention, 1959 (No.113)**
Purpose
To provide standards for the medical examination of fishermen taking into account the age of the fisherman and the work to be undertaken.

28. **Fishermen's Articles of Agreement Convention, 1959 (No.114)**
Purpose
To establish a system of articles of agreement for fishermen to be signed by the owner of a fishing vessel, or the owner's representative, in which their conditions of employment are clearly set out.

29. **Fishermen's Competency Certificate Convention, 1966 (No.125)**
Purpose

To set subjects to be included in curricula such as general nautical subjects, knowledge of international regulations, practical navigation, safe working practices, the operation of engines and other equipment, fishing techniques as appropriate, and the amount of theoretical and practical training to be undergone.

30. **Accommodation of Crews (Fishermen) Convention, 1966 (No.126)**
Purpose

To ensure adequate security, including emergency escapes, protection from the weather, ventilation of sleeping quarters, provision of sanitary and cooking areas as well as the provision of medicine chests and sick bays.

31 **Repatriation of Seafarers Convention (Revised),1987, (No.166). In Force.**
Purpose

To set conditions for the repatriation of seafarers leaving a ship.

D. INTERNATIONAL FISHERIES AGREEMENTS

32. **Convention for the International Council for The Exploration of the Sea (as amended). In force.**
Purpose

To provide a new constitution for the International Council for the Exploration of the Sea established in Copenhagen in 1902.

33. **Convention for the Establishment of an Inter-American Tropical Tuna Commission. In force.**
Purpose

To maintain populations of yellowfin and skipjack tuna in the eastern Pacific Ocean to permit maximum sustained catches year after year.

34. **International Convention for the High Seas Fisheries of the North Pacific (as amended). In force.**
Purpose

To ensure maximum sustained productivity of the fishery resources of the Pacific Ocean. To coordinate research and conservation measures to this end.

35. **North-East Atlantic Fisheries Convention (27/6/63)**
Superseded by the Convention on Future Multi-lateral Cooperation in the North East Atlantic Fisheries. In force.
Purpose

To ensure the conservation and rational exploitation of the fish stocks of the north east Atlantic Ocean and adjacent waters.

36. **Agreement Concerning Cooperation in Marine Fishing. In force.**
Purpose
To foster cooperation in the development of marine fishing, fishing techniques, fish processing technology and scientific research into the condition of living marine resources.

37. **International Convention for the Conservation of Atlantic Tunas. In force. (FAO)**
Purpose
To maintain populations of tuna and tuna-like fish in the Atlantic Ocean at levels permitting the maximum sustainable catch for food and other purposes.

38. **Convention on the Future Multi-lateral Cooperation in the North West Atlantic Fisheries. In force.**
Purpose
To promote the conservation and optimum utilisation of the fishery resources of the North West Atlantic area within a framework appropriate to the regime of extended coastal State jurisdiction over fisheries, and accordingly to encourage international cooperation and consultation with respect to these resources.

39. **South Pacific Forum Fisheries Agency Convention, 1979. In force. (FAO)**
Purpose
To ensure the conservation and optimum utilization of the living marine resources of the South Pacific Region in particular of highly migratory species as well as to promote regional cooperation and coordination of fisheries policies.

40. **Convention for the Conservation of Antarctic Marine Living Resources 1982. In force.**
Purpose
To elaborate measures to preserve the marine environment of the Antarctic to avoid collateral destruction of the living marine resources.

41. **Convention for the Conservation of Salmon in the North Atlantic Ocean 1982. In force.**
Purpose
To promote the conservation of salmon stocks in the North Atlantic Ocean through international cooperation.

42. **Convention of the Prohibition of Fishing with Long Driftnets in the South Pacific, 1989. In force.**
Purpose
To take measures consistent with international law to restrict drift net fishing activities within the Convention Area.

43. **Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas 1993. Not in force. (FAO)**

Purpose

To establish a system of authorization of vessels fishing the high seas and to deter flagging and reflagging as a means to avoid compliance with agreed conservation and management measures for high seas fishing.

44. **The Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10th December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks 1995. Not in force.**

Purpose

To ensure the long term conservation and sustainable use of straddling fish stock and highly migratory fish stocks through effective implementation of the relevant provisions of the Convention. The Agreement *inter alia* applies to the conservation and management of the relevant species within and beyond areas under national jurisdiction.

The above *examples* of international conventions, agreements, arrangements or other legal instruments, having a bearing on those engaged in fishing and the design and construction of types of vessels addressed by the Code as well as their operations, are also supported by many *resolutions and recommendations*. Further information should be sought from the Division for Ocean Affairs and the Law of the Sea or directly from the Organization concerned with respect to content and the current status of these instruments.

Division for Ocean Affairs and the Law of the Sea
United Nations,
New York, N.Y. 10017,
USA.

United Nations Conference on Trade and Development (UNCTAD)
Palais des Nations
CH-1211 Geneva 10
Switzerland.

United Nations Environment Programme
PO.Box 30552
Nairobi,
Kenya.

International Labour Organization
4, route des Morillons,
CH-1211 Geneva 22
Switzerland.

International Maritime Organization
4 Albert Embankment
London, SE1 7SR,
United Kingdom.

International Telecommunications Union
Place des Nations
CH-1211 Geneva 20,
Switzerland.

Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla,
00100, Rome,
Italy.

Commission for the Conservation of Antarctic Living Marine Resources
25, Old Wharf,
Hobart, Tasmania, Australia

South Pacific Forum Fisheries Agency
PO Box 629,
Honiara,
Solomon Islands.

Inter-American Tropical Tuna Commission
Scripps Institute of Oceanography
A 003 La Jolla
CA92093
USA

International Commission for the Conservation of Atlantic Tunas
Principe De Vergana,
17-28001, Madrid,
Spain.

International Council for the Exploration of the Sea
Palagraede 2-4
DK1261 Copenhagen,
Denmark.

North Atlantic Fisheries Organization
PO Box 638,
Dartmouth
Nova Scotia,
Canada.

North Atlantic Salmon Conservation Commission
11, Rutland Square,
Edinburgh, EH1 2AS
United Kingdom.

Annex II

The Standard Specifications for the Marking and Identification of Fishing Vessels

Preparation of this Annex

This document contains the specifications of a standardized system for the marking and identification of fishing vessels as endorsed by the FAO Committee on Fisheries, Rome, April 1989.

Background documents relating to this subject are the Report of the Expert Consultation on Fishing Vessel Markings, Halifax, Nova Scotia, Canada, 11-15 March 1985 (FAO Fisheries Report No.343), the Report of the World Conference on Fisheries. Management and Development, Rome, 16-20 June 1986 (FAO Fisheries Report No.367) and the Report of the Eighteenth Session of the FAO Committee on Fisheries, Rome, 10-14 April 1989 (FAO Fisheries Report No.416).

CONTENTS

FOREWORD

1. General Provisions

1.1 Purpose and scope
1.2 Definitions
1.3 Basis for the Standard Specifications

2. Basic System and Application

2.1 Basic system
2.2 Application

3. Technical Specifications

3.1 Specifications of letters and numbers
3.2 Painting

4. Registration of Marks

5. International Allocation of Call Signs

FOREWORD

The need for an international standard system for the marking and identification of fishing vessels was included in the Strategy for Fisheries Management and Development approved by the 1984 FAO World Fisheries Conference. An Expert Consultation on the Marking of Fishing Vessels convened by the Government of Canada, in collaboration with FAO, in Halifax, Nova Scotia, Canada, March 1985, elaborated the basis for a standard system.

A review of the report of this Expert Consultation by the Sixteenth Session of the FAO Committee on Fisheries resulted in a further Expert Consultation on the Technical Specifications for the Marking of Fishing Vessels convened in Rome, June 1986.

The Specifications contained herein were endorsed by the Eighteenth Session of the FAO Committee on Fisheries, Rome, April 1989, for adoption by States on a voluntary basis as a standard system to identify fishing vessels operating, or likely to operate, in waters of States other than those of the flag State. The Director General of FAO has informed the Secretary Generals of the International Maritime Organization (IMO) and the International Telecommunication Union (ITU) of the adoption of these Standard Specifications as an aid to fisheries management and safety at sea.

1. GENERAL PROVISIONS

1.1 Purpose and scope

1.1.1 As an aid to fisheries management and safety at sea, fishing vessels should be appropriately marked for their identification on the basis of the International Telecommunication Union Radio Call Signs (IRCS) system.

1.1.2 For the purpose of these Standard Specifications, the use of the word "vessel" refers to any vessel intending to fish or engaged in fishing or ancillary activities, operating, or likely to operate, in waters of States other than those of the flag State.

1.2 Definitions

For the purpose of these Specifications:

a) the word "vessel" also includes a boat, skiff or craft (excluding aircraft) carried on board another vessel and required for fishing operations;
b) a deck is any surface lying in the horizontal plane, including the top of the wheelhouse;
c) a radio station is one that is assigned an International Telecommunication Union Radio Call Sign.

1.3 Basis for the Standard Specifications

The basis for the Standard Specifications, the IRCS system, meets the following requirements:

a) the use of an established international system from which the identity and nationality of vessels can be readily determined, irrespective of size and tonnage, and for which a register is maintained;
b) it is without prejudice to international conventions, national or bilateral practices;
c) implementation and maintenance will be at minimum cost to governments and vessel owners; and,
d) it facilitates search and rescue operations.

2. BASIC SYSTEM AND APPLICATION

2.1 Basic system

2.1.1 The Standard Specifications are based on:

a) the International Telecommunication Union's system for the allocation of signs to countries for ship stations; and,
b) generally accepted design standards for lettering and numbering.

2.1.2 Vessels shall be marked with their International Telecommunication Union Radio Call Signs (IRCS).

2.1.3 Except as provided for in paragraph 2.2.6 below, vessels to which an IRCS has not been assigned shall be marked with the characters allocated by the, International Telecommunication Union (ITU) to the flag State and followed by, as appropriate, the licence or registration number assigned by the flag State. In such cases, a hyphen shall be placed between the nationality identification characters and the licence or registration number identifying the vessel.

2.1.4 In order to avoid confusion with the letters I and 0 it is recommended that numbers 1 and 0, which are specifically excluded from the ITU call signs, be avoided by national authorities when allocating licence or registration numbers.

2.1.5 Apart from the vessels name or identification mark and the port of registry required by international practice or national legislation, the marking system as specified shall, in order to avoid confusion, be the only other vessel identification mark consisting of letters and numbers to be painted on the hull or superstructure.

2.2 Application

2.2.1 The markings shall be prominently displayed at all times:

a) on the vessel's side or superstructure, port and starboard; fixtures inclined at an angle to the vessel's side or superstructure would be considered as suitable provided that the angle of inclination would not prevent sighting of the sign from another vessel or from the air;
b) on a deck, except as provided for in paragraph 2.2.4 below. Should an awning or other temporary cover be placed so as to obscure the mark on a deck, the awning or cover shall also be marked. These marks should be placed athwartships with the top of the numbers or letters towards the bow.

2.2.2 Marks should be placed as high as possible above the waterline on both sides. Such parts of the hull as the flare of the bow and the stern shall be avoided.

2.2.3 The marks shall:

a) be so placed that they are not obscured by the fishing gear whether it is stowed or in use;
b) be clear of flow from scuppers or overboard discharges including areas which might be prone to damage or discolouration from the catch of certain types of species; and,
c) not extend below the waterline.

2.2.4 Undecked vessels shall not be required to display the markings on a horizontal surface. However, owners should be encouraged, where practical, to fit a board on which the markings may be clearly seen from the air.

2.2.5 Vessels fitted with sails may display the markings on the sail in addition to the hull.

2.2.6 Boats, skiffs and craft carried by the vessel for fishing operations shall bear the same mark as the vessel concerned.

2.2.7 Examples of the placement of marks are set out in pages 47 to 69 of the FAO publication "The Standard Specifications for the Marking and Identification of Fishing Vessels".

3. TECHNICAL SPECIFICATIONS

3.1 Specifications of letters and numbers

3.1.1 Block lettering and numbering shall be used throughout.

3.1.2 The width of the letters and numbers shall be in proportion to the height.

3.1.3 The height (h) of the letters and numbers shall be in proportion to the size of the vessel in accordance with the following:

a) for marks to be placed on the hull, superstructure and/or inclined surfaces:

Length of vessel overall (LOA) in meters (m)	Height of letters and numbers in meters (m) to be not less than:
25 m and over	1.0 m
20 m but less than 25 m	0.8 m
15 m but less than 20 m	0.6 m
12 m but less than 15 m	0.4 m
5 m but less than 12 m	0.3 m
Under 5 m	0.1 m

b) for marks to be placed on deck: the height shall not be less than 0.3 m for all classes of vessels of 5 m and over.

3.1.4 The length of the hyphen shall be half the height of the letters and numbers.

3.1.5 The width of the stroke for all letters, numbers and the hyphen shall be $\frac{h}{6}$

3.1.6 Spacing:

a) the space between letters and/or numbers shall not exceed $\frac{h}{4}$ nor be less than $\frac{h}{6}$

b) the space between adjacent letters having sloping sides shall not exceed $\frac{h}{8}$ nor be less than $\frac{h}{10}$ for example A V.

3.2 Painting

3.2.1 The marks shall be:

a) white on a black background; or,
b) black on a white background.

3.2.2 The background shall extend to provide a border around the mark of not less than $\frac{h}{6}$

3.2.3 Good quality marine paints to be used throughout.

3.2.4 The use of retro-reflective or heat-generating substances shall be accepted, provided that the mark meets the requirements of these Standard Specifications.

3.2.5 The marks and the background shall be maintained in good condition at all times.

4. REGISTRATION OF MARKS

4.1 The International Telecommunication Union maintains and updates a worldwide register of International Radio Call Signs that contains details of the nationality of the vessel and its name.

4.2 In addition to maintaining a separate register of its vessels., which IRCS have been assigned, the flag State shall also maintain a record of vessels to which it has given a nationality identifier (allocated by the ITU), followed by the hyphen and licence/registration number; such records should include details of the vessels and owners.

5. INTERNATIONAL ALLOCATION OF CALL SIGNS

5.1 The International Telecommunication Union (ITU) Geneva allocates call signs to countries. These take the form of letters of the alphabet or number and letters, for example:

- one of the sets of call signs allocated to Italy is **LAA-IZZ** inclusive, whereas,
- one of the sets allocated to Malaysia is **9WA-9WZ .**

5.2 These signs allocated by the ITU clearly identify the flag State. The flag State adds further characters to the allocated call sign in order to identify the "radio station" (the vessel). A typical example being JNQK which is a Japanese vessel.

5.3 ITU should be contacted for an update of the List of Call Signs.

Annex III

Proposed System for the Marking of Fishing Gear

Preparation of this Annex

This annex contains the specifications of a proposed standardized system for the marking of fishing gear in order to identify the owner.

Background documents relating to the subject are the Reports of the FAO Committee on Fisheries (FAO Fisheries Reports No. 387; 416; 459 and 488), the Report of the Expert Consultation on the Marking of Fishing Gear, Victoria, British Columbia, Canada, 14-19 July 1991 (FAO Fisheries Report No.485), the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, the Agreement for the Implementation of the Provisions of the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks and the Code of Conduct for Responsible Fisheries as adopted by the Conference of FAO on 31 October 1995.

CONTENTS

A. Introduction

B. Proposed System for the Marking of Fishing Gear

1. General Provisions
2. A System for the Marking of Fishing Gear
3. Implementation of a Standard System
4. Recovery of Lost and Abandoned Fishing Gear
5. Salvage of Lost and Abandoned Fishing Gear
6. Fish Aggregating Devices

A. INTRODUCTION

1. Although the marking of fishing gear in order to identify the owner of the gear has been practised for centuries, there are still no common standards on how to mark fishing gear, what information should be carried by the mark or how the information should be stored and retrieved.

2. At the IMO, the lack of a common system made it difficult to deal with fishing gear in the development of MARPOL 73/78[1]. In order to address the issue, a recommendation on the development of the technology for the marking of fishing gear is included in the IMO Guidelines for the Application of Annex V of MARPOL.

3. The FAO Committee on Fisheries (COFI), at its 18th session in April 1989, "noted, that for the purpose of determining ownership, no international regulations, guidelines or common practices exist for the marking of fishing gear deployed outside national jurisdiction. Some delegations noted the problem as it related to the protection of living marine resources from entanglement in fishing nets and in the case of discarded fishing gear. It was noted that the elaboration of a standard for the marking of fishing gear would be of benefit to coastal States and recommended that further studies be undertaken".

4 Studies were carried out by the FAO with regard to systems used (past and present) as well as to identify available technology and, with the cooperation of the government of Canada, an Expert Consultation on the Marking of Fishing Gear was held in Victoria, British Colombia, Canada, 14-19 July 1991. It was found that whereas the systems varied in detail with the marks taking the form of tokens, multi-coloured twine, patent tags with a bar code to a vessels' radio call sign being used, it was common to have a simple record of the persons to whom the mark had been allocated, irrespective of whether these were individuals, companies or even communities.

5 The report of the Expert Consultation on the Marking of Fishing Gear was submitted to COFI in 1993 at which time, the Committee considered that there would be a need for further study before finalizing the text of a Standard System for the Marking of Fishing Gear.

6. At the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks[2], which concluded its work in August 1995, it was agreed that there should be "requirements for the marking of fishing vessels and fishing gear for identification in accordance with uniform and internationally recognizable marking

---

[1] *MARPOL 73/78 the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto.*

[2] *The Conference concluded its work in August 1995 with the adoption of the "Agreement for the Implementation of the United Nations Convention on the Law of the Sea of December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks".*

systems, such as the Food and Agriculture Organization of the United Nations Standard Specifications for the Marking and Identification of Fishing Vessels".

7. The Code of Conduct for Responsible Fisheries (the Code) makes provision for fishing gear to be marked in accordance with national legislation in order that the owner of the gear can be identified. It also provides for the authorization of fishing activities as well as the maintenance of records related to fishing vessels and that these records should include details of the vessels, their ownership and authorizations to fish. In this respect the Compliance Agreement[3], which is an integral part of the Code, makes important provisions for the maintenance of records in relation to fishing vessels (including details of ownership), as well as the storage, retrieval, and dissemination of data.

8. These developments, since the 20th. Session of COFI in 1993, made it possible to address the concerns expressed by some COFI members at that time with regard to the apparent additional administrative burdens that might accrue from the adoption of a common system for the marking of fishing gear.

9. The proposed System for the Marking of Fishing Gear and guidelines for the implementation of the system, as set out in this Annex, take into account *inter alia:*

a) the contents of the report of the Expert Consultation on the Marking of Fishing Gear (FAO Fisheries Report No. 485);
b) comments received by FAO following the 20th. Session of COFI ;
c) the negotiations at the U.N. Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks;
d) discussion on the marking of gear that took place during the elaboration of the Code of Conduct for Responsible Fisheries; and,
e) progress made in the preparation of data bases for the implementation of the Compliance Agreement.

---

3 *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas.*

B. PROPOSED SYSTEM FOR THE MARKING OF FISHING GEAR

1. General Provisions

1.1 Except in cases of force majeure or circumstances involving the safety of a vessel or its crew, it should be an offence under national law for any person to deliberately discard or dump any fishing gear or piece thereof into the aquatic environment.

1.2 Fishing Gear should be marked in accordance with national legislation in order that the owner of the gear can be identified. Gear marking requirements should take into account uniform and internationally recognizable gear marking systems.

1.3 The gear marking system should apply to all types of fishing gear and fishing implements as well as to all fisheries.

1.4 The system should provide:

a) a simple, workable and enforceable means of identifying the ownership of fishing gear;
b) a system that can be universally adopted; and,
c) a mechanism as an aid to fisheries management.

2. A System for the Marking of Fishing Gear

2.1. The system of marking fishing gear should be set out in national legislation .

2.2. The marking of fishing gear should be a condition of an *authorization to fish*. Whereas such a condition may vary in detail and extent with regard to the different fisheries, the authorization to fish it should, in general, include a requirement for the following information to be given on:

a) name and address of person(s) authorized to fish and name of vessel (where relevant);
b) gear type;
c) expected area of use; and,
d) principal target species.

2.3 The marking system should be designed, as and where appropriate, to reflect the special requirements of:

a) vessels fishing on the high seas;
b) vessels fishing in waters of States other than those of the flag State;
c) vessels of a coastal State fishing in waters under the jurisdiction of the same State; and,
d) owners of fishing gear and implements that are not associated with a fishing vessel.

2.4. The actual method or device used to display or carry information set out in paragraph 2.2, hereinafter referred to as the "mark" or "marks", should be :

a) simple;
b) inexpensive;
c) easily manufactured having regard to locally available materials;
d) easily read or deciphered;
e) able to stay attached;
f) durable; and,
g) designed so that they do not interfere with the operation and performance of the fishing gear and, in the case of tags, capable of accepting a variety of printed or embossed data.

2.5 The "mark" should, as a minimum, give or hold sufficient information through which the name and address of the owner may be traced. FAO Fisheries Report 485 (Supp.) describes types of tags and of the means for the identification of ownership; it being understood that there should be a link in the information chain between the mark and the record of authorization to fish maintained by the State.

2.6 The system should also provide for the:

a) reporting of fishing gear lost, abandoned or otherwise discarded;
b) reporting of fishing gear found;
c) recovery of lost or abandoned[4] fishing gear; and,
d) the disposal of old and unwanted gear.

3. Implementation of a Standard System

3.1 The marking of fishing gear should be a condition of the authorization to fish.

3.2 States individually or in cooperation with other States, either bilaterally or through subregional or regional fisheries bodies, should decide :

a) on a system to be adopted;
b) the fisheries to be targeted;
c) reporting procedures;
d) data storage, retrieval and information exchange; and,
e) exemptions.

3.3 An owner should be allocated a mark or code, that would only apply to all of the fishing gear and fishing implements so owned.

3.4 The competent authority may authorize the use of a common mark to a company, organization of fishers or similar entity, if it can be demonstrated that the fishing gear to be marked can be used by more than one group of users or vessels on a

---

[4] *Abandoned gear as provided for under paragraph 1.1 above.*

rotational or common pool basis. In such cases, the owner(s), identified by the mark, should keep a log of the location of the gear.

3.5 In the case of a mothership operation, the fishing gear carried by the catcher vessels may carry the mark of the mothership.

3.6 All vessels fishing on the high seas, should use a commonly agreed system for the marking of fishing gear. Since the Compliance Agreement provides for a system for the marking of fishing vessel that would be on the basis of the International Telecommunications Union Radio Call Signs (IRCS) it would be appropriate to use this as the basis for the marking of the fishing gear. For those vessels to which an IRCS has not been assigned, the mark would display or hold information consisting of the characters allocated to a flag State by the ITU, and followed by a hyphen, and as appropriate, the number of registration of the vessel or the number on the authorization to fish. Benefits would also accrue from the adoption of such a system with regard to the maintenance of any records to be kept and the exchange of information that may be required[5].

3.7 Likewise, for fishing vessels authorized to fish in the waters of States other than those of the flag State, the coastal States concerned should accept a marking system for fishing gear of such vessels as described for the high seas in paragraph 3.6 above.

3.8 States, regional and subregional fisheries bodies should ensure that control and enforcement of a system for the marking of fishing gear is an integral part of arrangements for the monitoring, control and surveillance of fisheries.

3.9 In the event of loss or abandonment of fishing gear, the owner should be required to report the fact to the competent authority.

3.10 Every effort should be made by the owner to retrieve lost gear or abandoned gear.

3.11 Where gear lost or abandoned, may be a danger to navigation, the owner of the gear concerned[6] should immediately warn other mariners in the vicinity as well as the competent authority, giving details of the gear as well as its last known position. The competent authority should use the most effective local means to give a general warning to mariners.

---

[5] *Gear marks carrying, as a minimum, the IRCS of a vessel would also enable other mariners to identify the flag State and the vessel concerned which would simplify the reporting of lost and abandoned gear.*

[6] *The skipper of a vessel, or person in charge of the vessel, if different from the owner, should be considered to be acting for the owner. The report made on return to harbour should, if practical, be countersigned by the owner.*

3.12 The competent authority may impose appropriate penalties on an owner for non-compliance with the system for the marking of gear and fishing implements, including FAD's, in particular, for:

a) deploying fishing gear without displaying the mark so required as a condition of an authorization to fish;
b) deliberate removal of a mark;
c) use of a mark allocated to another owner or to other gear; and,
d) providing false information on the use, loss, abandonment or disposal of fishing gear.

4. Recovery of Lost and Abandoned Fishing Gear

4.1 The competent authority should ensure that owners of fishing gear have adequate equipment available for the recovery of gear.

4.2 In the event of failure of the owner to recover lost and abandoned gear, the competent authority should make appropriate arrangements for its recovery, particularly if the gear:

a) presents a hazard to the navigation of surface and sub-surface vessels;
b) fouls reefs;
c) fouls spawning beds;
d) becomes an impediment to fishing; or,
e) would continue to ghost fish.

4.3 The competent authority should encourage the re-use of recovered gear.

5. Salvage of Lost and Abandoned Fishing Gear

5.1 National legislation concerning *salvage*, should provide for fishing gear found or picked up at sea, whether marked or unmarked, to be delivered in the shortest possible time to the competent authority responsible for dealing with wrecks.

5.2 Owners, national or foreign, should be informed of gear recovered (where appropriately marked), any liens on the gear and arrangements for them to collect the gear.

5.3 The competent authority may levy a fee for each piece of gear returned to the owners and such income may be used to offset the cost of retrieval.

6. Fish Aggregating Devices

6.1 The authorization to fish should also include conditions in relation to the deployment of fish aggregating devices and, in addition to carrying a mark to identify ownership of a FAD, the authorization should relate to the:

a) type of FAD;
b) location of the allocated datum geographical position; and,
c) the fishing activities permitted at the FAD.

6.2 The responsibility for recovery of drifting FAD's should lie with the owner.

6.3 The loss of a FAD (drifting or anchored) should be treated in the same way as lost or abandoned fishing gear.

6.4 The competent authority, should take appropriate action in accordance with paragraph 5.2 above in the event of a lost or abandoned FAD considered to be a hazard to navigation.

Annex IV

Proposals for the Application of a Standard System of Lights and Shapes for the Identification and Location of Fishing Gear

Preparation of this Annex

This annex contains the specifications of a proposed standard system for the identification of types of gear set, where the gear is set and in which direction as well for the location of gear that may be unattended.

Background documents relating to the subject are, the Report of the eighteenth session of the FAO Committee on Fisheries Rome, April 1989 (FAO Fisheries, Report No.416), the Report of the Expert Consultation on the Marking of Fishing Gear, Victoria, British Columbia, Canada, 14-19 July 1991, relevant Reports of the Maritime Safety Committee of the International Maritime Organization and the International Regulations for the Prevention of Collisions at Sea.

CONTENTS

A. Introduction

B. A Standard System of Lights and Shapes for Fishing Gear and Fishing Implements

1. General Provisions
2. Technical Provisions
3. Application of a Standard System
4. Technical Specifications

A. INTRODUCTION

1. In its discussions on the marking of fishing gear at the Eighteenth session of the FAO Committee on Fisheries (COFI), most delegates agreed that there was a need for a review of lights and shapes displayed by vessels engaged in fishing and certain types of fishing gear. The Committee invited the Director-General of FAO to bring this matter to the attention of the International Maritime Organization (IMO), and noted that careful consideration must be given to the costs that any changes may imply.

2. The matter was brought to the attention of IMO where it was referred to its Sub-Committee on Navigation which requested its members to submit comments and proposals on the need to amend Rule 26 of the Collision Regulations. It also took note of the intention of FAO to convene an Expert Consultation on the Marking of Fishing Gear where the identification of ownership of lost, abandoned and unattended fishing gear was to be considered. Since this issue was seen to constitute a hazard to sea mammals and birds as well as to the safety of navigation, the Sub-Committee decided to give consideration to any recommendations resulting from the FAO consultation.

3. The IMO participated in the Expert Consultation for the Marking of Fishing Gear, Victoria, British Colombia, Canada, 14-19 July 1991. The Consultation agreed that in order to protect the fishers and their gear and to warn mariners of the presence of deployed fishing gear, a standard system of lights and shapes would be useful. It was also agreed that the technical specifications of such a system would need to be distributed to all mariners so that all would know and understand the marks, lights, use of radar reflectors and shapes that might be encountered at sea. Such information would need to be included in training programmes not only for fishers but other mariners as well.

4. The IMO reviewed the report of the Expert Consultation on the Marking of Fishing Gear as well as recommendations for amendments to the COLREGS. It agreed with FAO that the optional lights provided for in Section 2 of Annex II to the 1972 Collision Regulations should be mandatory for vessels of 20 metres or more in length when engaged in trawling, whether using demersal or pelagic gear, or when pair trawling. IMO could not agree with the proposal to allow the use of flashing yellow lights shown by purse seiners (described in Section 3 of Annex II of the Collision Regulations), by other vessels engaged in fishing operations when such fishing operations involve extensive alterations of course or speed, or both, and when the vessel concerned is hampered by its gear. It agreed, however, that the marking of fishing gear in order to identify its position in the sea, need not be included in the COLREGS.

5. This Annex has been prepared on the basis of the Report of the Expert Consultation for the Marking of Fishing Gear (FAO Fisheries Report No.485 and its Supplement), and the outcome of discussions at the International Maritime Organization. (IMO).

B. A STANDARD SYSTEM OF LIGHTS AND SHAPES FOR FISHING GEAR AND FISHING IMPLEMENTS

1. General Provisions

1.1 In order to protect fishers and their gear and to warn other mariners of the presence of deployed fishing gear, States should make provisions in national legislation for the adoption of a standard system of lights and shapes for the identification of fishing gear and for marking its position in the water.

1.2 States should make provisions for the inclusion of the details of the system in training programmes for fishers and other mariners.

1.3 The need to comply with a system of lights and shapes related to fishing gear, fishing implements and fishing vessels should be a condition of the authorization to fish.

2. Technical Provisions

2.1 The system should take into account:

a) the provision of the International Regulations for the Prevention of Collisions at Sea (COLREGS);
b) any local rules, including rules of navigation governing river, lake or coastal fisheries;
c) regulations pertaining to offshore structures; and,
d) systems for the marking of fishing gear for the identification of ownership.

2.2 Where practicable, all position indicators attached to fishing gear should:

a) be as conspicuous as possible in a clear daytime atmosphere from a distance of at least 2 nautical miles at sea level;
b) carry radar reflectors;
c) carry lights with characteristics which do not conflict with those of navigational marks and which would be visible on a clear night at a distance of at least 2 nautical miles; and,
d) be fitted with a coloured flag or flags of fluorescent material, as an aid to daytime visibility.

2.3 Lights and shapes should also indicate the direction and extent of set and drifting gear.

2.4 Electronic devices, such as transponders and radio beacons which automatically and continuously indicate their position by means of signals may be used in addition to the lights and shapes. Such devices, however, must not operate at frequencies that would conflict with other devices used for navigation and search and rescue purposes.

3. Application of a Standard System

3.1 An individual pot, trap, fyke net, stake net and other similar gear, should be marked with a buoy or other device at the surface to indicate its position. Gear set in series, such as a number of pots connected are on line, should be marked at each end with a buoy.

3.2 Anchored or drifting fishing gear with the upper continuous edge of the geàr at a depth of more than 2 metres below the surface should be marked in the following manner:

a) fishing gear set below the level of the sea and extending from an anchor or parent vessel, should be marked at both extremities by a spar buoy and at intermediate positions. The distance between the intermediate marks, and between the intermediate marks closest to the extremities and the extremity markers should not exceed one kilometre. In the case of fishing gear attached to a vessel, the extremity of the gear nearest to the vessel need not carry a marker;

b) for recognition in daytime, the westernmost end spar buoy of such gear extending horizontally in the sea should be fitted with two flags one above the other or one flag and a radar reflector. The end spar buoy at the most easterly extremity should be fitted with one flag or a radar reflector; and,

c) for night time recognition, the most westerly end spar buoy should have two white lights one above the other; the most easterly end spar buoy to have one white light.

3.3 Fishing gear set within the upper two metres of the water column, and therefore a hazard to small transiting vessels, should be marked in the following manner:

a) for day time recognition, the extremities of the gear should have spar buoys carrying top marks consisting of two spherical shapes, one above the other at no more than one metre apart; the diameter of the upper of the two spheres to be smaller but no less than one half the diameter of the lower one;

b) for night time recognition, the spar buoys placed at the extremity of the gear should have two yellow lights, one above the other at no less than one metre apart and of different characteristics to lights fitted to intermediate buoys;

c) gear extending more than one kilometre should have intermediate buoys placed at distances of not more than one kilometre; intermediate spar buoys should have one spherical shape for day time recognition and one yellow light for night time;

d) "gates" should be provided for the free passage of surface vessels. Each side of the gate should be marked by spar buoys; the closest intermediate float should not be more than 10 meters from these spar buoys; and,

e) attended gear need not be marked at the extremity attached to a fishing vessel.

3.4 The dhan-buoy used with active gear, such as anchor seining, fly dragging and purse seining, should comply with the provisions as set out in paragraph. 2.2.

3.5 Fish aggregating devices should be marked in the same way as fishing gear and carry means to identify their position by day and by night. As a minimum requirement, they should comply with the provisions set out in paragraph 2.2. The requirements of paragraph 2.4 should apply to the use of electronic devices fitted to FAD's.

4. Technical Specifications

4.1 A spar buoy should meet the following specifications:

a) the pole of a spar buoy extending above the floatation buoy should have a height of at least 2 metres; the height of the spar buoy may be less than 2 metres of an administration is satisfied that the fishing gear so marked would not be a hazard to navigation;

b) where radar reflectors are required, they should be fitted at the top of the pole;

c) the size of flags should not be less than 25 centimetres in height and 35 centimetres in width[1]; when two flags are required, the distance between them should not be less than 10 centimetres; flags should be made of waterproof material in fluorescent colours;

d) lights should be attached to the pole in such a way that they will not be obscured by a flag;

e) for shapes that give the appearance of being spherical when viewed from a distance, provided for in paragraph 3.3 c) above, the lower of the spherical shapes and the shape, if only one is fitted, should have a diameter of not less than 30 centimetres, the upper shape should be smaller in diameter but not less than half that of the lower shape; and when two shapes are required, they should not be less than 10 centimetres apart; and,

f) intermediate floats should have a diameter of not less than 50 centimetres[2].

---

1 *Flags should not be too large otherwise they could affect the ability of the spar buoy to remain as upright as possible in strong winds.*

2 *The competent authority should take into account locally available material for the construction of floats and whereas most fishers use a spherical shape, in some parts of the world it is common practice to use pieces of wood bound together; the underlying principle is that they should be visible from a distance.*

4.2 Radar reflectors should be:

a) as light as possible;
b) octahedral in shape; and,
c) of metal plate or wire mesh construction.

4.3 Lights should be visible at a distance of at least 2 nautical miles; and preferably of a type that are fitted with sensors that automatically switch the light on at dusk and off at daylight[3].

4.4 Radio Beacons may be of a type that can be attached to the pole of the spar buoy or FAD, if they are of the free floating type, they should be linked to the spar buoy.

---

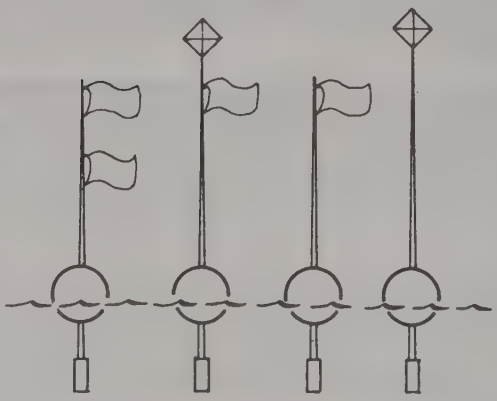
[3] *The competent authority should take into consideration local practice since the type of lights available would dictate whether or not these could be attached to the pole of a spar buoy.*

Appendix 1

Examples of Lights, Shapes and Acoustic Devices

Use flags for gear that drifts and is set below the upper 2m in the water column.

See Para 3.2 b)

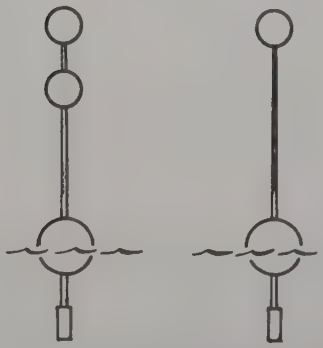


Spar Buoy

End Buoy Intermediate Buoy

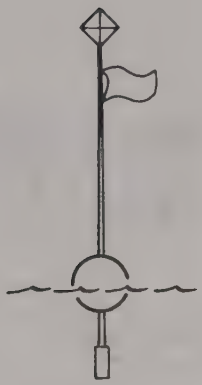
Use spherical shapes when drifting gear is set in the upper 2m of the water column.

See Para 3.3 a) and c)

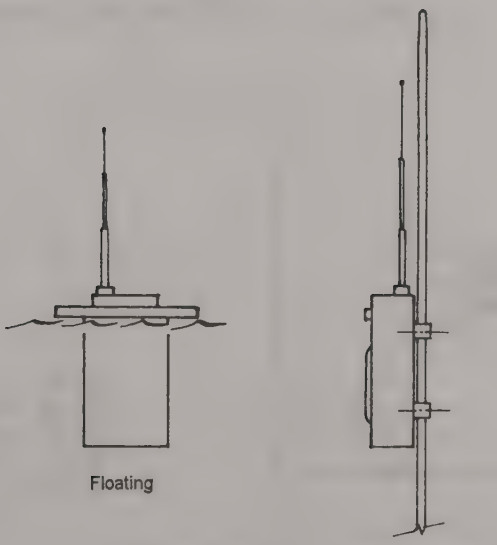


Spar Buoy

Dhan buoy as used with active gear such as anchor seining, fly dragging and purse seining.

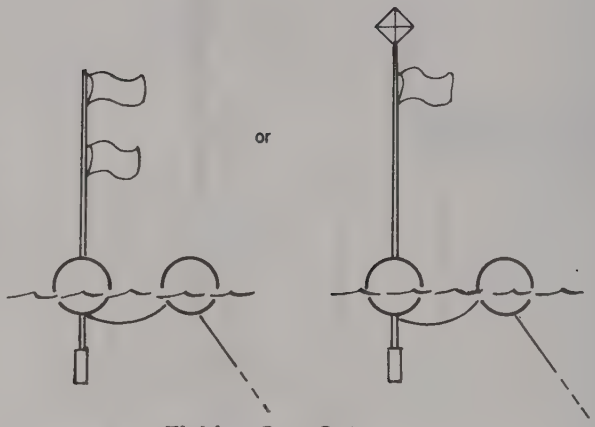


Dhan Buoy



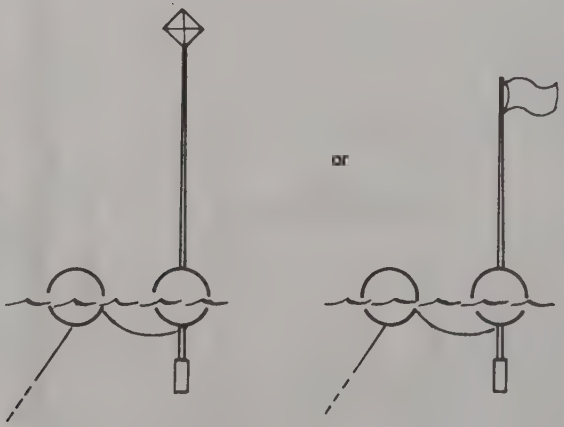
Radio Beacon

Spar buoy indicating fishing gear lying to the East of the buoy.

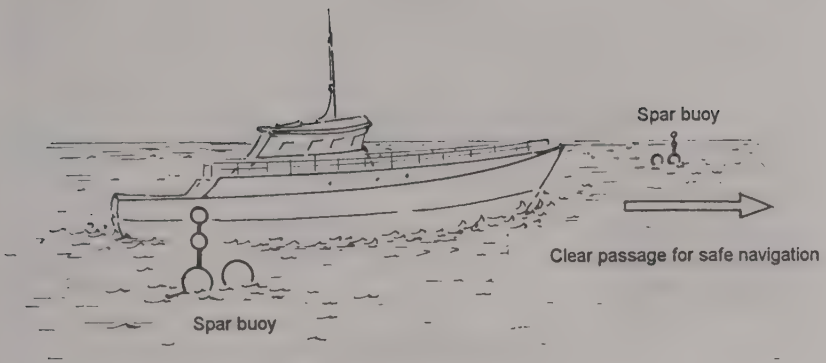


Fishing Gear Set
Below the Upper 2m of the Water Column

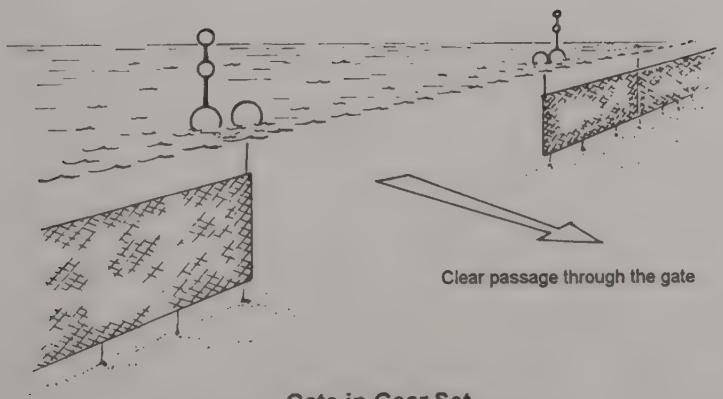
Spar buoy indicating fishing gear lying to the West of the buoy.



Fishing Gear Set
Below the Upper 2m in the Water Column

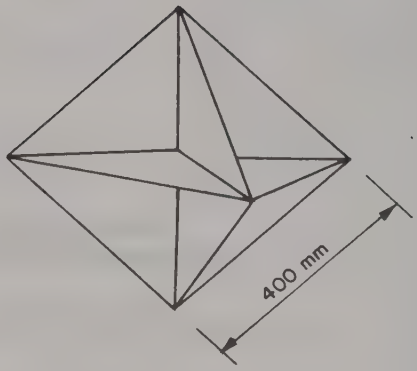


Gate in Gear Set
in Upper 2m of the Water Column



Gate in Gear Set
in Upper 2m of the Water Column

Aluminium plate or wire mesh is suitable. To provide a good target, the reflector should be a reasonable size; however if too large , the windage effect could cause the buoy to heel excessively.



Radar Reflectors

Annex V

Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone

Preparation of this Annex

This annex contains guidelines and standards for the complete and partial removal of offshore structures as adopted by the International Maritime Organization (IMO), 19 October 1989.

The basic document for reference is Resolution A 672 (16) of the Assembly of IMO and the Annex thereto.

CONTENTS

A. Introduction

B. Resolution A.672(16)

C. Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone

1. General Removal Requirement

2. Guidelines

3. Standards

A. INTRODUCTION

In debate at the International Maritime Organization (IMO), representatives of the fishing industry expressed concern that their interests were not given sufficient mention in the decision process leading to the removal of redundant offshore structures and installations. They also argued that pipelines should be included in any removal scheme and, that accumulated debris should be removed. The actual guidelines and standards developed by IMO do not emphasize the interests of any particular user of the seas.

The Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil requires an operator to remove any installation which is abandoned or disused, in order to ensure safety of navigation, taking into account the guidelines and standards adopted by the competent international organization. Such removal shall have due regard to other legitimate uses of the sea, in particular, fishing.

The Code of Conduct for Responsible Fisheries recognizes that the fisheries sector should be consulted prior to any decision being made on the abandonment of structures and other materials by the competent authorities.

For the information of the fisheries sector, this document contains the IMO Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone.

B. RESOLUTION A.672(16)

Adopted on 19 October 1989
Agenda item 10

GUIDELINES AND STANDARDS FOR THE REMOVAL OF OFFSHORE INSTALLATIONS AND STRUCTURES ON THE CONTINENTAL SHELF AND IN THE EXCLUSIVE ECONOMIC ZONE

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the international Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution,

BEARING IN MIND article 60 of the United Nations Convention on the Law of the Sea, 1982, which prescribes that any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization, and that such removal shall also have due regard to fishing, protection of the marine environment and the rights and duties of other States,

BEARING IN MIND ALSO that the International Maritime Organization is the competent Organization to deal with this subject,

HAVING CONSIDERED the draft guidelines and standards approved by the Maritime Safety Committee at its fifty-seventh session which were developed in cooperation with the Marine Environment Protection Committee,

1. ADOPTS the Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone set out in the Annex to the present resolution;

2. RECOMMENDS that Member Governments take into account the aforesaid Guidelines and Standards when making decisions regarding the removal of abandoned or disused installations or structures.

C. GUIDELINES AND STANDARDS FOR THE REMOVAL OF OFFSHORE INSTALLATIONS AND STRUCTURES ON THE CONTINENTAL SHELF AND IN THE EXCLUSIVE ECONOMIC ZONE

1. GENERAL REMOVAL REQUIREMENT

1.1 Abandoned or disused offshore installations or structures on any continental shelf or in any exclusive economic zone are required to be removed, except where non-removal or partial removal is consistent with the following guidelines and standards.

1.2 The coastal State having jurisdiction over the installation or structure should ensure that it is removed in whole or in part in conformity with these guidelines and standards once it is no longer serving the primary purpose for which it was originally designed and installed, or serving a subsequent new use, or where no other reasonable justification cited in these guidelines and standards exists for allowing the installation or structure or parts thereof to remain on the sea-bed. Such removal should be performed as soon as reasonably practicable after abandonment or permanent disuse of such installation or structure.

1.3 Notification of such non-removal or partial removal should be forwarded to the Organization.

1.4 Nothing in these guidelines and standards is intended to preclude a coastal State from imposing more stringent removal requirements for existing or future installations or structures on its continental shelf or in its exclusive economic zone.

2. GUIDELINES

2.1 The decision to allow an offshore installation, structure, or parts thereof, to remain on the sea-bed should be based, in particular, on a case-by-case evaluation, by the coastal State with jurisdiction over the installation or structure, of the following matters:

.1 any potential effect on the safety of surface or subsurface navigation, or of other uses of the sea;

.2 the rate of deterioration of the material and its present and possible future effect on the marine environment;

.3 the potential effect on the marine environment, including living resources;

.4 the risk that the material will shift from its position at some future time;

.5 the costs, technical feasibility, and risks of injury to personnel associated with removal of the installation or structure; and

.6 the determination of a new use or other reasonable justification for allowing the installation or structure or parts thereof to remain on the sea-bed.

2.2 The determination of any potential effect on safety of surface or subsurface navigation or of other uses of the sea should be based on: the number, type and draught of vessels expected to transit the area in the foreseeable future; the cargoes being carried in the area; the tide, current, general hydrographic conditions and potentially extreme climatic conditions; the proximity of designated or customary sea lanes and port access routes; the aids to navigation in the vicinity; the location of commercial fishing areas; the width of the available navigable fairway; and whether the area is an approach to or in straits used for international navigation or routes used for international navigation through archipelagic waters.

2.3 The determination of any potential effect on the marine environment should be based upon scientific evidence taking into account: the effect on water quality; geological and hydrographic characteristics; the presence of endangered or threatened species; existing habitat types; local fishery resources; and the potential for pollution or contamination of the site by residual products from, or deterioration of, the offshore installation or structure.

2.4 The process for allowing an offshore installation or structure, or parts thereof, to remain on the sea-bed should also include the following actions by the coastal State with official authorization identifying the jurisdiction over the installation or structure: specs conditions under which an Installation or structure, or parts thereof, will be allowed to remain on the sea-bed; the drawing up of a specific plan, adopted by the coastal State, to monitor the accumulation and deterioration of material left on the sea-bed to ensure there is no subsequent adverse impact on navigation, other uses of the sea or the marine environment; advance notice to mariners as to the specific position, dimensions, surveyed depth and markings of any installations or structures not entirely removed from the seabed; and advance notice to appropriate hydrographic services to allow for timely revision of nautical charts.

3. STANDARDS

The following standards should be taken into account when a decision is made regarding the removal of an offshore installation or structure.

3.1 All abandoned or disused installations or structures standing in less than 75 m of water and weighing less than 4,000 tonnes in air, excluding the deck and superstructure, should be entirely removed.

3.2 All abandoned or disused installations or structures emplaced on the sea-bed on or after 1 January 1998, standing in less than 100 m of water and weighing less than 4,000 tonnes in air, excluding the deck and superstructure, should be entirely removed.

3.3 Removal should be performed in such a way as to cause no significant adverse effects upon navigation or the marine environment. Installations should continue to be marked in accordance with IALA recommendations prior to the completion of any partial or complete removal that may be required. Details of the position and dimensions of any installations remaining after the removal operations should be promptly passed to the relevant national authorities and to one of the world charting hydrographic authorities. The means of removal or partial removal should not cause a significant adverse effect on living resources of the marine environment, especially threatened and endangered species.

3.4 The coastal State may determine that the installation or structure may be left wholly or partially in place where:

.1 an existing installation or structure, including one referred to in paragraphs 3.1 or 3.2, or a part thereof, will serve a new use if permitted to remain wholly or partially in place on the sea-bed (such as enhancement of a living resource); or

.2 an existing installation or structure, other than one referred to in paragraphs 3.1 and 3.2, or part thereof, can be left there without causing unjustifiable interference with other uses of the sea.

3.5 Notwithstanding the requirements of paragraphs 3.1 and 3.2, where entire removal is not technically feasible or would involve extreme cost, or an unacceptable risk to personnel or the marine environment, the coastal State may determine that it need not be entirely removed.

3.6 Any abandoned or disused installation or structure, or part thereof, which projects above the surface of the sea should be adequately maintained to prevent structural failure. In cases of partial removal referred to in paragraphs 3.4.2 or 3.5, an unobstructed water column sufficient to ensure safety of navigation, but not less than 55 m, should be provided above any partially removed installation or structure which does not project above the surface of the sea.

3.7 Installations or structures which no longer serve the primary purpose for which they were originally designed or installed and are located in approaches to or in straits used for international navigation or routes used for international navigation through archipelagic waters, in customary deep-draught sea lanes, or in, or immediately adjacent to, routeing systems which have been adopted by the Organization should be entirely removed and should not be subject to any exceptions.

3.8 The coastal State should ensure that the position, surveyed depth and dimensions of material from any installation or structure which has not been entirely removed from the sea-bed are indicated on nautical charts and that any remains are, where necessary, properly marked with aids to navigation. The coastal State should also ensure that advance notice of at least 120 days is issued to advise mariners and appropriate hydrographic services of the change in the status of the installation or structure.

3.9 Prior to giving consent to the partial removal of any installation or structure, the coastal State should satisfy itself that any remaining materials will remain on location on the sea-bed and not move under the influence of waves, tides, currents, storms or other foreseeable natural causes so as to cause a hazard to navigation.

3.10 The coastal State should identify the party responsible* for maintaining the aids to navigation, if they are deemed necessary to mark the position of any obstruction to navigation, and for monitoring the condition of remaining material. The coastal State should also ensure that the responsible party* conducts periodic monitoring, as necessary, to ensure continued compliance with these guidelines and standards.

3.11 The coastal State should ensure that legal title to installations and structures which have not been entirely removed from the sea-bed is unambiguous and that responsibility for maintenance and the financial ability to assume liability for future damages are clearly established.

3.12 Where living resources can be enhanced by the placement on the sea-bed of material from removed installations or structures (e.g. to create an artificial reef), such material should be located well away from customary traffic lanes, taking into account these guidelines and standards and other relevant standards for the maintenance of maritime safety.

3.13 On or after 1 January 1998, no installation or structure should be placed on any continental shelf or in any exclusive economic zone unless the design and construction of the installation or structure is such that entire removal upon abandonment or permanent disuse would be feasible.

3.14 Unless otherwise stated, these standards should be applied to existing as well as future installations or structures.

* The phrase "party responsible" refers to any juridical or physical person identified by the coastal State for a purpose mentioned in the above paragraph 3.10.

Annex VI

Procedures for the Development and Management of Harbours and Landing Places for Fishing Vessels

Preparation of this Document

This annex contains proposals for procedures to be followed with regard to the management, development and maintenance of harbours and landing places for fishing vessels. It also gives guidance on the conduct of environmental auditing with regard to proposals for new construction and the upgrading of existing facilities.

Background documents relating to the subject are the Report of the Regional Consultation on Cleaner Harbours, Penang, Malaysia, 9-11 December 1991, Protocol to the Barcelona Convention concerning exploration and exploitation of the continental shelf and the seabed and its subsoil, FAO project reports in relation to harbours in Cyprus, Kuwait, Iran, Pakistan and the Maldives, as well as IMO documentation with regard to MARPOL.

CONTENTS

A. Introduction

B. Standard Procedures

1. General Provisions
2. Scope and Objectives
3. Management
4. Environmental Auditing Procedures
5. Environmental Assessments
6. Planned Changes
7. Anticipated Impact
8. Mitigating Measures
9. Design Criteria
10. Education and Training
11. References

A. INTRODUCTION

1. The increasing problems associated with the construction of new harbours and landing places for fishing vessels and in particular, their operation and maintenance, reached critical levels in some parts of the world. In many instances, the adverse effects of harbour pollution from the activities of fishing vessels as well as the those of vendors and processors was exacerbated by the almost total lack of reception facilities. Matters became more serious in the late 1980's with an ever increasing demand for assistance from developing countries to solve specific problems with existing harbours as well as for help in designing new installations.

2. In the Bay of Bengal sub-region, the matter gave great cause for concern and, with the cooperation of the International Maritime Organization (within its cleaner seas programme) the Bay of Bengal Programme (BOBP) commissioned a series of important studies. At the same time, FAO also embarked on the preparation of a manual in relation to harbours and landing places to give guidance on design, construction and maintenance of harbours and landing places. An important component of this manual dealt with the reduction of pollution.

3. In connection with the activities of the BOBP the Government of Malaysia hosted a subregional workshop at Penang, 9-11 December, 1991 at which the results of the studies carried out by the BOBP project were presented. The FAO secretariat reported on its activities in other regions and IMO highlighted developments with regard to MARPOL[1].

4. At the UN Conference on the Environment and Development (UNCED), June 1992, in relation to the protection of the marine environment the need for a precautionary and anticipatory approach rather than a reactive approach was seen to be necessary to prevent degradation of the marine environment. UNCED recommended, inter-alia, the adoption of environmental impact assessment procedures.

5. In recent years, environmental auditing has become an accepted norm for development within coastal areas. It ensures that a State, in consultation with the promoter of a project proposal, can jointly make an assessment of a project and the effect of the planned activities with regard to any significant adverse impact upon the environment. The auditing mechanism also provides for a preliminary assessment or partial audit, on the basis of which a government can decide whether or not to go ahead with a proposal. It also provides the basis for a decision with regard to a full environmental audit. In addition, taking into consideration the size and cost of the project, as well as the practicality of the exercise, it can provide the terms of reference for the full audit.

6. Although it was apparent from the studies undertaken by the BOBP and FAO, that impact assessments with respect to coastal development seemed to be a matter of common sense, the reality of the matter indicated otherwise. Similarly, the level of co-operation between users of the coastal area often fell far short of what was needed.

---

[1] *International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)*

7. Therefore, in the preparation of this Annex, account has been taken of the requirement for better systems of management identified by the BOBP workshop in Penang, recent developments in the implementation of MARPOL with regard to cleaner harbours (port reception facilities), Agenda 21 of UNCED and Articles 8 and 10 of the Code of Conduct for Responsible Fisheries (the Code).

B. STANDARD PROCEDURES

1. GENERAL PROVISIONS

1.1 Within the concepts of responsible fishing operations and the integration of fisheries into coastal area management, this Annex provides a technical framework for the implementation of procedures as an aid to the management and development of harbours and landing places for fishing vessels.

1.2 Provisions are made for the formulation and implementation of environmental audits for future fisheries related infrastructure projects.

1.3 Although forming a part of the Code of Conduct for Responsible Fisheries, that is voluntary, some provisions of this annex may be or have already been given binding effect by means of legal instruments, such as UNCLOS 82[2], the MONTREAL PROTOCOL[3] and MARPOL 73/78.

2. SCOPE AND OBJECTIVES

2.1 The proposed procedures are global in scope, and directed towards all persons, whether in government or the private sector, involved in the planning, design, construction, maintenance and management of harbours, harbour infrastructure and landing places for fishing vessels.

2.2 The objective is to enhance the capacity of States to ensure the adoption of environmentally sound development, management and conservation practices through :

a) better standards of management in harbours and landing places for existing and future facilities;
b) the establishment of environmental auditing procedures and design criteria related to future fisheries infrastructure projects; and,
c) appropriate training and education in environmental awareness.

---

2 *United Nations Convention on the Law of the Sea of 10 December, 1982*

3 *Montreal Protocol to the Vienna Convention*

3. MANAGEMENT

3.1 States should ensure that an appropriate legal and institutional framework is adopted to manage coastal zone development.

3.2 The fisheries sector should be an integral part of the coastal zone management arrangements in order to ensure that:

a) due account is taken of the rights of coastal fishing communities and their customary practices to the extent compatible with sustainable development; and,
b) that the fisheries sector, together with fishing communities are consulted in the decision making process regarding fisheries related projects as well as providing for their inputs in non-fisheries activities related to coastal area management.

3.3 States should take measures to establish effective management bodies at the fish landing or harbour levels to ensure:

a) compliance with the laws, regulations and other legal rules governing the duties of a port State in relation to a fishing harbour or a fish landing facility;
b) compliance with environmental conservation and monitoring measures adopted by the competent authorities at the national level as well as measures adopted on a regional or subregional basis[4];
c) integration with other users (as in the case of a non-exclusive facility for fishing vessels); and,
d) transparency in the decision making process.

3.4 In establishing a management body, the competent authorities should ensure that such bodies :

a) are adequately funded to function as intended;
b) represent the whole spectrum of users of the facility;
c) allow for consultation between the various users;
d) are commensurate with the size of the facility and the duties of the body and the responsibilities assigned to it.

3.5 At the village level, the management could be entrusted to a Community Fishery Centre (CFC) or similar organization of fisherfolk. Although the facilities and services within a particular village or area may be quite modest; there is still a need for an organized form of management[5].

3.6 At the industrial level, the management should be implemented by a well defined body (Private, Autonomous, Municipal or State), with the members drawn from the various constituent users of the port as well as the community at large. An exception to the rule

---

[4] *The provisions or regional or subregional agreements to which the coastal State is a party would normally be incorporated in national legislation.*

[5] *See FAO guidelines for the establishment and operation of Community Fishing Centres*

would be where the facilities are owned by a single company. Nevertheless, the company would remain accountable, within the overall management structure, for its operations.

4. ENVIRONMENTAL AUDITING PROCEDURES

4.1 States should ensure that development proposals are formulated in a precautionary rather than a reactive manner to minimise unwarranted degradation of the aquatic environment.

4.2 States should also establish procedures for the inclusion of future development proposals for harbours and landing places for fishing vessels into national development plans, and where applicable, fisheries or coastal zone management plans. These procedures should be sufficiently flexible to accommodate requests for proposals within a programming period which may arise, for instance, as a consequence of unforeseen changes in the fisheries sector, including natural disasters.

4.3 States should also ensure that all such proposals are supported by clearly defined justifications.

4.4 States should adopt environmental audits in support of all applications for construction or improvement of harbours or landing places for fishing vessels, whether in coastal zones or inland waters[6].

4.5 The auditing procedures required for carrying out a full environmental audit in compliance with commonly accepted standards, should:

a) assess the existing environment, including the land-use characteristics and socio-cultural activities at the proposed site;
b) list the planned changes to be made to the environment by the proposed project;
c) estimate the anticipated impact of the planned project on the existing environment[7];
d) propose mitigation measures to prevent (or mitigate) the anticipated impact on the existing environment; and,
e) establish a system of environmental monitoring in the vicinity of the project site.

4.6 In order to commence an auditing process, States should ensure that all applications submitted in respect of new constructions are accompanied by a detailed outline design of the proposal.

4.7 A detailed outline design of the proposal should be a stand alone document. It should consist of a detailed description and layout of the project proposal in relation to its surroundings, the anticipated demand on the resources of the area both during construction and operation, together with mitigation and environmental monitoring proposals. The

---

6 *Institutional bodies or private sector organizations with the capacity to carry out such audits should be identified.*

7 *See FAO paper on fishery harbour planning, reference 1.*

detail in the detailed outline design should be commensurate with the size of the proposed project; the larger the project the more detail required. This document should form part of the environmental audit up and until full planning or building permission has been issued by the competent authorities.

5. ENVIRONMENTAL ASSESSMENTS

5.1 The existing environment around a project site should be assessed through :

a) onshore topographic and offshore bathymetric maps (down to the 20 metre contour) of the site, covering at least 1 km in each direction along the coast;
b) aerial imagery of the above mentioned area with a resolution not smaller than 1:2000 together with any satellite imagery available[8];
c) details of existing or planned coastal structures within 5 km of the proposed site;
d) a morphological description of the coastal zone of the site, backed up by a geological description of important local features such as cliffs, sand dunes, beaches, reefs, terraces, rivers, dams on nearby rivers, river mouths;
e) wave, tide or lake level statistical characteristics including probability tables for extreme conditions;
f) seasonal variations in rainfall, river flows, water density, water temperature, nutrients concentration and microbial pollution levels;
g) geological, petrographic and sedimentological characteristics of the coastline and seabed, including source, volume and seasonal changes in littoral transport;
h) maps of onshore and offshore habitats in and around the project site (coral reefs, lagoon systems, mangroves, estuaries etc.);
i) maps of types of habitat in and around the project site (areas of refuge, feeding grounds, nursery and spawning);
j) lists of the species to be harvested, lists of protected or rare species and biological indicators as well as the methods of fishing;
k) layouts, size and capacity of resource networks, such as for water supplies, power supply and distribution, road and other communications and sewerage networks, etc.; and,
l) location maps of any type of activity discharging directly or indirectly effluent into the aquatic environment, including distant but connected water courses, such as sewer outfalls, onshore fish farms, slaughter houses, logging/saw mill concessions, wood pulp factories, mines and ore reduction plants and other industries.

---

[8] *Satellite images are available for many parts of the world. The FAO remote sensing unit and its network of regional stations could provide appropriate reference points.*

6. PLANNED CHANGES

6.1 Assessments should address the planned changes to the environment and should include:

a) a general description of the entire project, including location, type, size and typical cross-sections of the various components that together make up the project together with a description of the proposed stages of construction;
b) the additional demands which would be placed on the locally available resources, both during construction and operation of the project;
c) details of all the effluents and emissions arising from the project; and,
d) the changes in the landscape, including land use characteristics and socio-cultural activities envisaged in the project;

7. ANTICIPATED IMPACT

7.1 The estimation of the anticipated impact of the planned project on the existing environment should include:

a) topographic, bathymetric and oceanographic changes, including dredging and reclamation, during and after construction until stable conditions are resumed, together with their effect on habitats, flora, fauna and land use;
b) changes in water quality (temperature, salinity, turbidity, dissolved oxygen, nutrients concentration and microbial pollution levels) during and after construction and their effect on habitats, flora, fauna and land use;
c) sources of pollution discharging effluent, emissions or solid wastes during and after construction until stable conditions are resumed and their effect on habitats, flora, fauna and land use; and,
d) the visual impact on the seascape and the landscape and general quality of life around the proposed project site.

7.2 In the valuation of the coastal resources the competent authorities should take into account all elements of value, not just those elements for which markets happen to exist. The fact that a resource is not traded in a market does not mean it is of no value (consider for instance the social benefits of a clean beach, the tourist potential of a coral reef, or the health implications of clean air).

8. MITIGATING MEASURES

8.1 The detailed outline design should list the proposed measures to prevent or reduce (mitigate) the negative effects upon the environment. The mitigation measures should be:

a) technical, i.e, oil reception facilities, waste re-cycling schemes, sewage treatment systems, CFC-free refrigeration equipment and by-pass dredging where applicable;
b) managerial, i.e., a clearly defined harbour board, commensurate with the size of the proposed project and the responsibilities expected of it; and,

c) legal and administrative, i.e. frameworks formulated in conformity with national laws to provide for sanctions in respect of violations.

8.2 The detailed outline design should also list the proposed monitoring measures to identify environmental degradation as early as possible.

8.3 In the first instance such proposals should identify the appropriate indicators and secondly the institutional bodies with the capacity to carry out the monitoring process. These indicators could be :

a) physical parameters (i.e. changes in coastal morphology such as erosion or siltation);
b) biological parameters (i.e. edibility of certain shellfish);
c) chemical parameters (water quality); and,
d) socio-economic parameters (such as population density and income levels).

9. DESIGN CRITERIA

9.1 In general, States should adopt acceptable design criteria for the design and construction of harbours and landing places for fishing vessels to ensure against unwarranted degradation of the aquatic environment. Design criteria for both the detailed outline design and the final design should ensure, inter alia:

a) compliance with basic engineering principles regarding the morphological degradation of the coastal zone in respect of erosion and siltation (UNCED 92)[9];
b) compliance with all relevant conventions concerning pollution of the aquatic environment (MARPOL 73/78); and,
c) the provision of adequate monitoring of the effects of operations on the environment (UNCED 92).

9.2 The detailed outline design should enable the competent authorities to make a preliminary assessment of the project and the effect of the planned activities with regard to any significant adverse impact upon the existing environment.

9.3 The detailed outline design of a project proposal should be based on the following minimum technical requirements :

a) detailed current topographic and bathymetric maps, resolution not smaller than 1:1000;
b) wave, tide or lake level statistical hindcast studies, including probability tables for extreme conditions;
c) geological, petrographic and sedimentological characteristics of the coastline and seabed; and,
d) mathematical and/or physical hydraulic modelling of the anticipated changes in the shoreline (including erosion, and siltation) and conditions at sea (including wave reflections and circulation).

---

[9] *The United Nations Conference on Environment and Development, 1992.*

9.4 The competent authorities should ensure that :

a) the resolution and accuracy of the maps are adequate and verifiable;
b) the wave statistical and hindcast studies are reliable;
c) the geological studies are adequate in extent and detail; and,
d) the hydraulic models are adequate in extent and calibration and the results reliable.

9.5 Final design should only be submitted after the environmental audit has been approved by the competent authorities.

9.6 States should ensure that final design adheres strictly to the detailed outline design (and approved modifications) as approved by the competent authorities in the final version of the environmental audit.

9.7 The final design should comply with the relevant provisions of International Conventions to which the State is a party, such as:

a) **UNCLOS 1982** - which establishes rules concerning environmental standards as well as enforcement provisions dealing with pollution of the marine environment;
b) **MONTREAL PROTOCOL 1987** - which protects the ozone layer by taking measures to control equitably total global emissions of substances that deplete it;
c) **MARPOL 73/78** - which protects the marine environment by eliminating completely pollution due to oil and other harmful substances; and,
d) **LONDON CONVENTION 1972**- which controls pollution of the sea by dumping.

10. EDUCATION AND TRAINING

10.1 States should promote awareness of environmental issues related to fishing harbours and landing places. The target audience should include:

a) direct users;
b) other user groups;
c) those responsible for the management and operation of such facilities; and,
d) the general public.

10.2 States should ensure that the provisions of the Code in relation to harbour and landing places are brought to the attention of those responsible for the training and certification of fishermen. Awareness programmes should ensure that these provisions are brought to the attention of all those employed directly in the fisheries industry, and their families.

10.3 Such training and awareness programmes should incorporate guidelines on personal hygiene, public health (sanitation) and on how to maintain harbours and landing places in a clean condition.

10.4 Other user groups may be served through community based arrangements supported by government extension services, such as:

a) Community Fishing Centres (CFCs)[10]
b) Fishery Development Units[11] (FDUs); and,
c) Vocational training programmes, which could include the general public.

10.5 States should ensure that their awareness programmes are supported by requiring those responsible for the management and operation of fishing harbours and landing places, to prominently display by-laws and regulations (billboards, posters and newspapers) for the benefit of all users.

10.6 The general public, and as appropriate, those still at school, could also be targeted by community wide awareness programmes or association of these issues with environmental studies.

11. REFERENCES

1. FISHERY HARBOUR PLANNING - FAO Fisheries Technical Paper No 123, Food and Agriculture Organization of the United Nations, Rome 1973.

2. COMMUNITY FISHERY CENTRES : GUIDELINES FOR ESTABLISHMENT AND OPERATION - FAO Fisheries Technical Paper No 264, Ben-Yami M, Anderson A.M., Food and Agriculture Organization of the United Nations, Rome 1985.

3. CONSTRUCTION AND MAINTENANCE OF ARTISANAL FISHING HARBOURS AND VILLAGE LANDINGS - FAO Training Series No 25, Sciortino J.A., Food and Agriculture Organization of the United Nations, Rome 1995.

4. LINKING GOVERNMENT AGENTS AND LOCAL USERS: PARTICIPATORY URBAN APPRAISAL FOR ARTISANAL FISHING PORT DEVELOPMENT - Reusen R., Johnson J. International Institute for Environment and Development, Issue No 21, Nov. 1994.

5. GUIDELINES FOR CLEANER FISHERY HARBOURS, BOBP (Madras 1993)

---

10 FAO/IMO guidelines Ref. 3 and 5

11 Fisheries Technical Paper 264 on guidelines for the establishment and operation on FDU's.

In accordance with the recommendations of the Committee on Fisheries (COFI), FAO prepared the first draft of technical guidelines in relation to fishing operations, which were submitted to the Technical Consultation on the Code of Conduct for Responsible Fisheries, Rome, 26 September to 5 October 1994. The draft was prepared taking into account the Declaration of Cancún, Agenda 21 of the United Nations Conference on Environment and Development (UNCED) and the Report of the Expert Consultation on Responsible Fishing Operations, Sidney, British Columbia, Canada, 6 to 11 June 1994. Thereafter, the draft was revised taking into account the negotiations of the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks and the elaboration of the Code of Conduct for Responsible Fisheries. The technical guidelines are given in support of the implementation of the Code of Conduct in relation to fishing operations. They are addressed to States, international organizations, fisheries management bodies, owners, managers and charterers of fishing vessels, and fishermen and their organizations. Guidance is also given with respect to the general public.

ISBN 92-5-103914-3 ISSN 1020-5292

9 789251 039144

M-40 W3591E/3/11.99/2000